

Prepared for:
Georgia Power Company

2017 Annual Groundwater Monitoring and Corrective Action Report

Plant McIntosh Coal Combustion By-product
Landfill No. 4
Permit No. 051-010D (L) (I)

January 31, 2018

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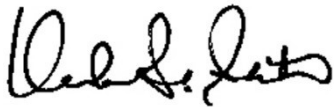
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Plant McIntosh

Coal Combustion By-product Landfill No. 4

Permit No. 051-010D (L) (I)

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Hunter Sartain, P.E.
Principal



Greg Jirak, P.G.
Project Manager

Environmental Resources Management
The Towers at Wildwood
3200 Windy Hill Rd., Suite 1500 West
Atlanta, GA 30339
Phone: +1-678-486-2700

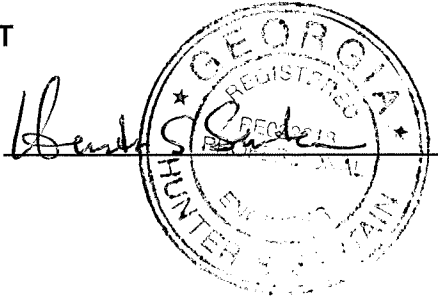


CERTIFICATION STATEMENT

This 2017 *Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant McIntosh – Coal Combustion By-product Landfill No. 4 (CCB LF4)* 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: _____

1/31/19

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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), Coal Combustion By-product Landfill No. 4 (CCB LF4) 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. The plant property is on the west bank of the Savannah River at Big Kiffer Point. CCB LF4 is on the western portion of the plant property, approximately 1.5 miles west of the Savannah River. CCB LF4 is located approximately 800 feet south of Lockner Creek. An aerial photograph of Plant McIntosh and surrounding area is included as Figure 1, Site Location Map.

CCB LF4 is composed of Cells 1, 2A, 2B, 3, and 4. Cell 1 is currently completing closure construction. GPC began construction of Cell 2A in June 2015, and was approved to begin receiving solid waste for disposal on July 20, 2017. Cells 2B, 3, and 4 are for future development.

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 & 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 CCB LF4 as interbedded clays, silts, and sands typical of Coastal Plain sediments.

The uppermost aquifer at CCB LF4 is the surficial aquifer, characterized by silty, sandy clays, clayey silts, silty sands, and fine to medium grained sands. Monitoring wells and piezometers were screened in the surficial aquifer between 36 and 11 (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 CCB LF4. The monitoring system is designed to monitor groundwater passing the waste boundary of CCB LF4 within the uppermost aquifer. Wells were located to serve as upgradient and downgradient monitoring points based on groundwater flow direction (Table 1, Monitoring Well Network Summary).

2.0 GROUNDWATER MONITORING ACTIVITIES

As required by §257.90(e), the following subsections describe monitoring-related activities performed during the preceding year. Since this is the first *Annual Groundwater Monitoring and Corrective Action Report*, it also describes activities performed prior to 2017 to establish the groundwater monitoring program. All groundwater sampling was performed in accordance with §257.93. Samples were collected from each well in the monitoring system shown on Figure 2.

Pursuant to §257.90(e)(3), Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed at CCB LF4.

2.1 MONITORING WELL INSTALLATION AND MAINTENANCE

In accordance with §257.91, a groundwater monitoring system was installed that (1) consists of a sufficient number of wells, (2) installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) meets the performance standards of §257.91(a).

The certified groundwater monitoring system consists of 19 monitoring wells, as shown on Figure 2. Groundwater monitoring wells GWC-1, GWA-2, GWA-3, GWC-4, GWC-5, GWC-9, GWC-10, GWC-11, and GWC-12 were installed around Cell 1 in August 2004 during initial permitting of the facility. In October and November 2015, during development of Cell 2A, GPC installed ten (10) additional monitoring wells (GWA-13, GWA-14, GWC-15, GWA-16, GWC-17, GWC-18, GWC-19, GWC-20, GWC-21, and GWC-22).

Monitoring well GWC-4 was damaged when it was struck by construction equipment in July 2016 and was abandoned on August 3, 2016. One (1) replacement groundwater monitoring well, GWC-4A, was installed within 50 feet of GWC-4. Monitoring well GWC-22 did not produce sufficient volume during sampling, and was converted to a piezometer. GWC-23 was installed approximately 45 feet southeast of GWC-22 as a replacement in May 2016.

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 Coal Combustion By-product Landfill No. 4 Analytical Data Summary.

2.2.2 Initial Detection Monitoring

Following background monitoring, the initial detection monitoring event was completed prior to October 17, 2017 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 CCB LF4.

3.1 GROUNDWATER ELEVATION MEASUREMENT

Prior to each sampling event, groundwater elevations were recorded from GWC-22 and each well in the network at CCB LF4. Groundwater elevations recorded during the background and initial detection monitoring event 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 northwest to northeast. 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 CCB LF4 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

The average hydraulic conductivity used in the calculation is 0.859 feet per day (ft/day) as presented in the *Savannah Electric Plant McIntosh Ash Monofill Site Acceptability Report* (Southern Company Services, 2002). The hydraulic gradient was calculated between GWA-3 and GWC-10, and GWA-14 and GWC-18. An estimated effective porosity of 0.30 was 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 CCB LF4 was calculated as 0.040 ft/day, 14.6 ft/year.

3.3 GROUNDWATER SAMPLING

Groundwater samples were collected in accordance with §257.93(a). Purging and sampling was performed using bladder pumps or peristaltic pumps. The use of bladder pumps was dependent on the water level at time of the sampling event. The pumps were lowered into the well so that the intake was at 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
- ± 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 discussed below) and are 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 CCB LF4.

4.1 STATISTICAL METHOD

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

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

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

- Statistical analyses are not performed on analytes containing 100% non-detects (USEPA, 2009).
- When data contain less than 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 the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric PL 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 CCB LF4 was statistically analyzed in accordance with the PE-certified statistical methods. Initial SSIs were verified through subsequent resampling and analysis. 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: GWC-10
- Calcium: GWC-10, GWC-11, GWC-18, and GWC-19
- Chloride: GWC-9
- Fluoride: GWC-11 and GWC-18
- pH: GWC-10, GWC-11, and GWC-18
- TDS: GWC-10 and GWC-11

Pursuant to §257.94(e), within 90 days from determining an SSI, GPC will either (1) prepare a demonstration that a source other than CCB LF4 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 CCB LF4. Therefore, statistical analysis of the Appendix IV data has not been performed.

5.0 MONITORING PROGRAM STATUS

CCB LF4 is in detection monitoring. SSIs of Appendix III parameters have been identified. Pursuant to §257.94(e)(1-2), Plant McIntosh has 90 days from the date of determination to either (1) prepare a demonstration that a source other than CCB LF4 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 CCB LF4 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

Driscoll, 1986. *Groundwater and Wells*. Second Edition. Johnson Division, St. Paul, MN.

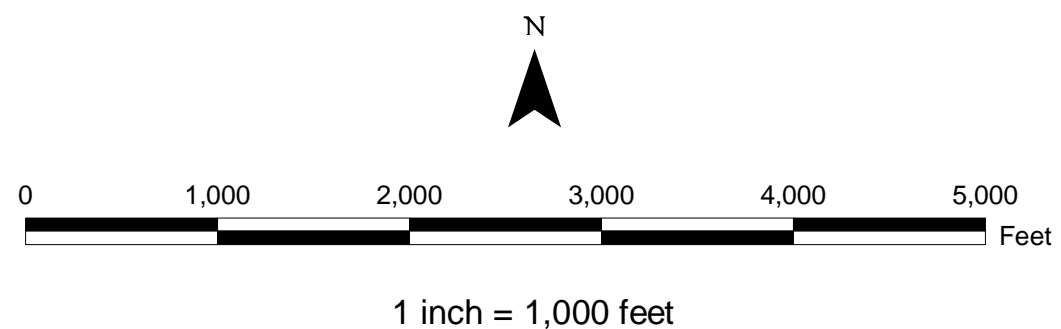
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Legend

CCB LF4



Environmental Resources Management

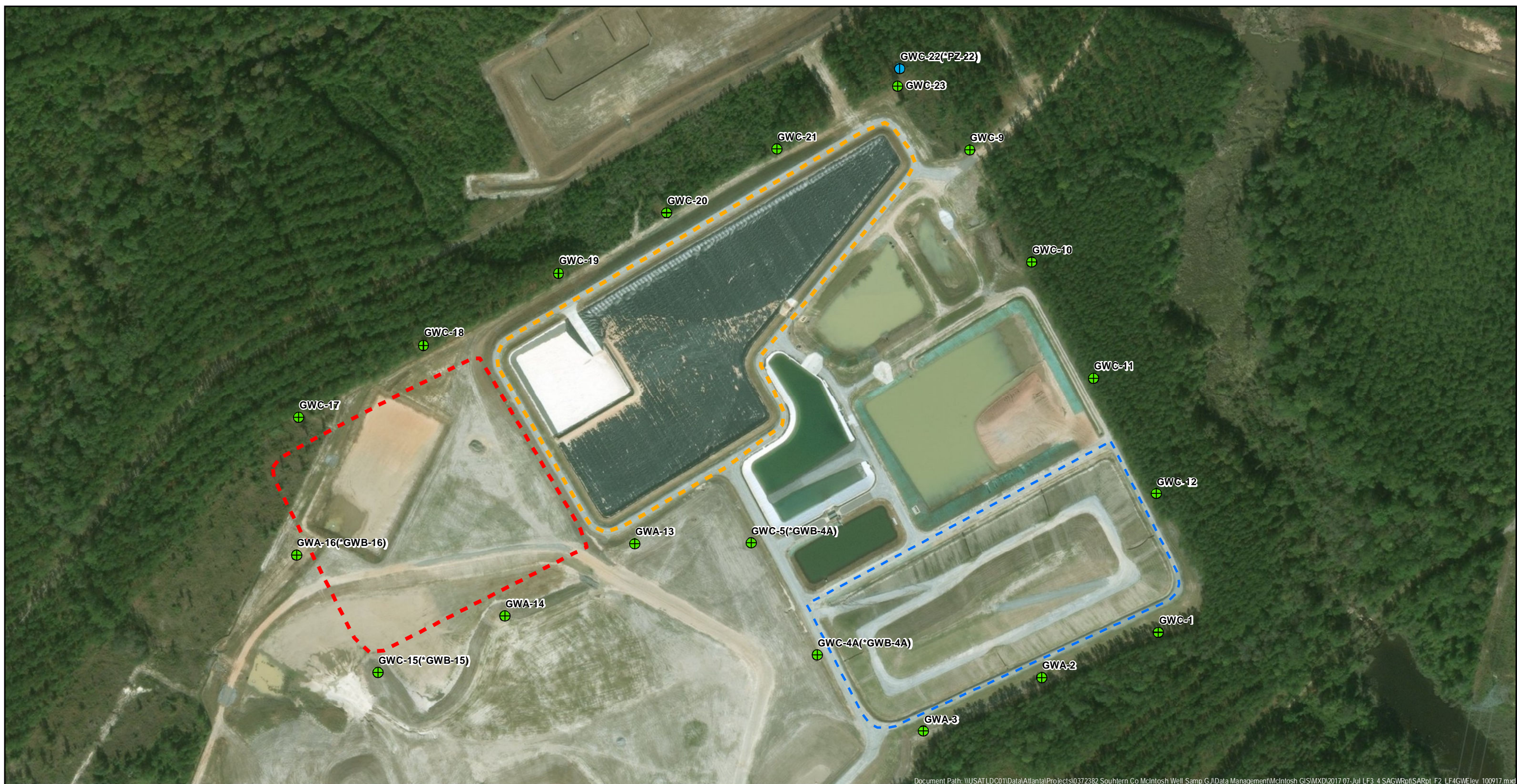
FOR

Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONTD	REV
As Shown	SARpt_F1_LF4AerialSiteLoc	1	As Shown	0

FIGURE 1
SITE LOCATION MAP

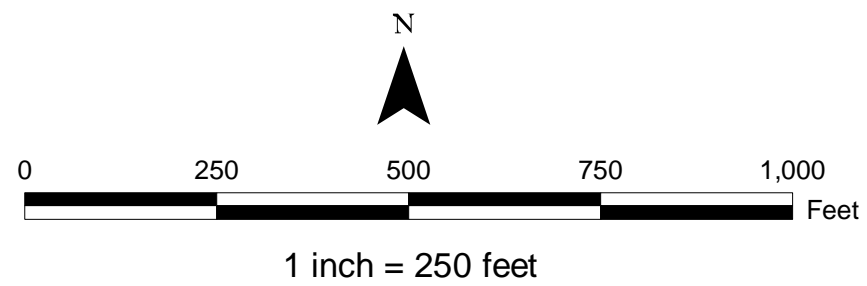
PLANT MCINTOSH CCB LF 4
RINCON, EFFINGHAM COUNTY, GEORGIA



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Legend

- Monitoring Well
- Piezometer
- Cell 1
- Cell 2A
- Cell 2B



* Change requested as part of March 2017 D&O Modification

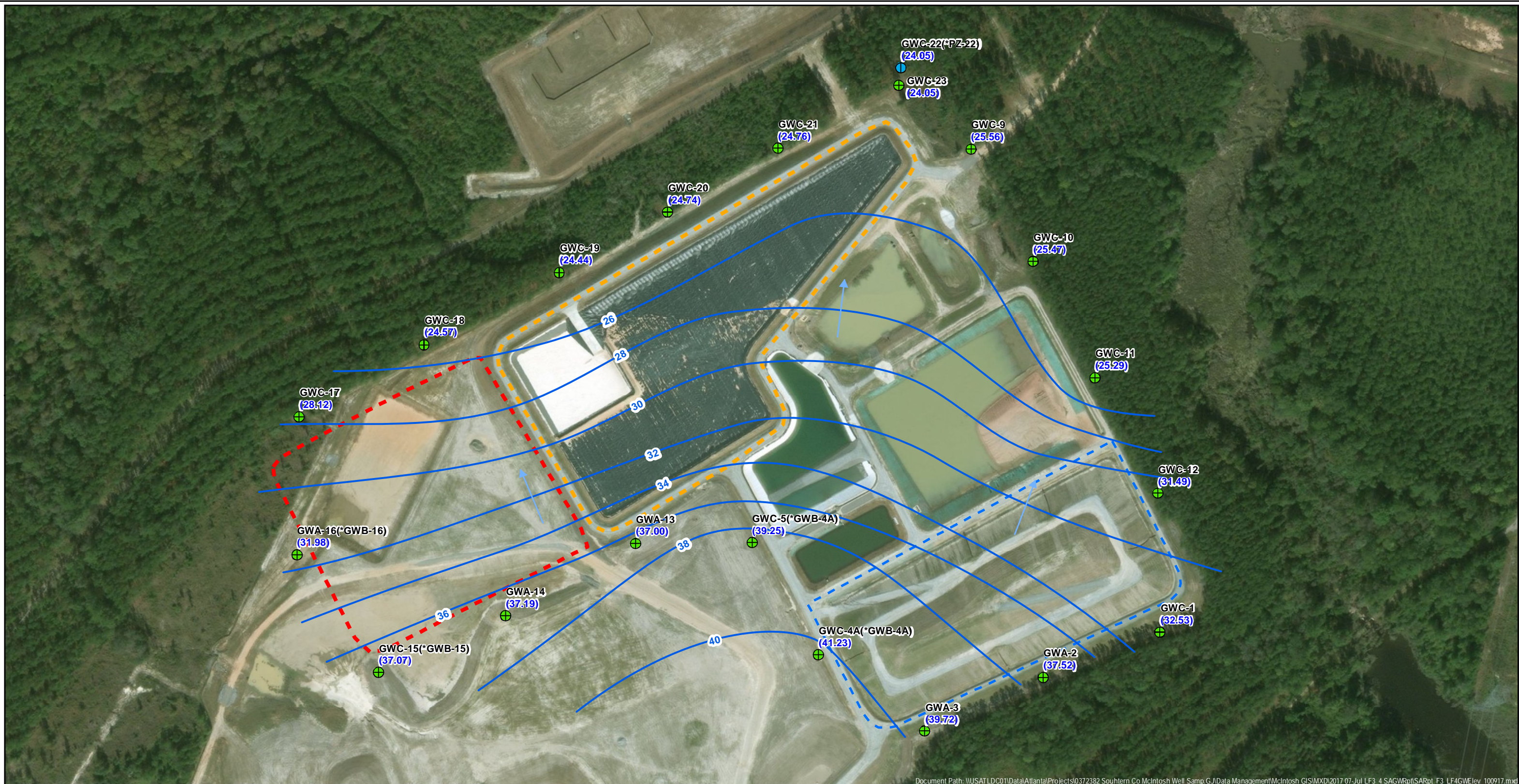
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SCALE	DRAWING NUMBER	SHEET	CONTD	REV
As Shown	SARpt_LF2_LF4GWElev_100917	2	As Shown	0

FIGURE 2
 SITE PLAN AND WELL LOCATION MAP
 PLANT MCINTOSH CCB LF4
 RINCON, EFFINGHAM COUNTY, GEORGIA



Document Path: \\USATLDC01\Data\Alliantal\Projects\0372382 Southern Co. McIntosh Well Samp. GJ\Data Management\McIntosh GIS\MXD\2017-07-Jul_LF3_4_SAGWRpt\SARpt_LF3_LF4GWElev_100917.mxd

Legend

- Monitoring Well
- Piezometer
- Apparent Potentiometric Surface Contour
- Apparent Groundwater Flow Direction
- Cell 2B
- Cell 1
- Cell 2A

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

* Change requested as part of March 2017 Permit Modification Request

N

0 250 500 750 1,000
Feet

1 inch = 250 feet

Environmental Resources Management

FOR

Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONTD	REV
As Shown	SARpt_LF3_LF4GWElev_100917	2	As Shown	0

FIGURE 3
 POTENTIOMETRIC SURFACE CONTOUR MAP -
 OCTOBER 2017
 PLANT MCINTOSH CCB LF 4
 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)
GWC-1	Downgradient	08/17/2004	855431.30	958419.36	47.06	28.50	29.06	19.06	10
GWA-2	Upgradient	08/17/2004	855308.90	958103.93	53.64	28.50	35.64	25.64	10
GWA-3	Upgradient	08/17/2004	855163.12	957786.21	57.93	38.50	29.93	19.93	10
GWC-4A (*GWB-4A)	Upgradient	08/04/2016	855352.55	957496.51	64.98	39.00	35.58	25.58	10
GWC-5 (*GWB-5)	Upgradient	08/18/2004	855671.33	957319.99	62.29	41.50	31.29	21.29	10
GWC-9	Downgradient	08/16/2004	856732.82	957909.70	53.56	38.50	25.56	15.56	10
GWC-10	Downgradient	08/19/2004	856429.88	958077.92	49.55	33.50	26.55	16.55	10
GWC-11	Downgradient	08/18/2004	856116.10	958244.61	57.97	43.50	24.97	14.97	10
GWC-12	Downgradient	08/18/2004	855803.80	958413.62	57.26	41.50	26.26	16.26	10
GWA-13	Upgradient	10/23/2015	855669.87	957006.97	60.85	40.11	31.04	21.04	10
GWA-14	Upgradient	10/27/2015	855474.41	956656.96	61.40	49.90	21.80	11.80	10
GWC-15 (*GWB-15)	Upgradient	10/27/2015	855322.23	956314.50	56.72	40.30	26.72	16.72	10
GWA-16 (*GWB-16)	Upgradient	10/27/2015	855640.15	956094.66	54.60	40.27	24.63	14.63	10
GWC-17	Downgradient	10/28/2015	856011.50	956102.41	54.19	40.05	24.44	14.44	10
GWC-18	Downgradient	10/29/2015	856205.99	956438.21	59.68	42.20	27.78	17.78	10
GWC-19	Downgradient	10/29/2015	856400.89	956801.55	53.62	36.95	26.97	16.97	10
GWC-20	Downgradient	10/30/2015	856562.11	957093.85	47.23	30.13	27.40	17.40	10
GWC-21	Downgradient	11/4/2015	856734.08	957390.27	45.16	27.16	28.30	18.30	10
GWC-22 ⁽¹⁾ (*PZ-22)	Downgradient	11/4/2015	856950.68	957722.64	51.07	31.65	29.72	19.72	10
GWC-23	Downgradient	05/26/2016	856905.66	957714.42	52.16	33.70	32.40	22.40	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

BTOC = below top of casing

MSL = mean sea level

() = Modification to the well name

⁽¹⁾ Monitoring well GWC-22 was replaced with GWC-23 in May 2016

*Change requested as part of March 2017 Design and Operations Plan Modification

NA = not applicable

TABLE 2. GROUNDWATER SAMPLING EVENT SUMMARY

Well ID	Hydraulic Location	Summary of Sampling Events											Status of Monitoring Well
		April 19-21, 2016	June 13-16, 2016	August 8-11, 2016	September 26-29, 2016	November 14-16, 2016	January 10-17, 2017	February 27-March 2, 2017	April 17-25, 2017	July 13, 2017	October 9-12, 2017	December 12-13, 2017	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection	Verification	
GWC-1	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWA-2	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWA-3	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-4A (*GWB-4A)	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-5 (*GWB-5)	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-9	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	V01	Detection
GWC-10	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	V01	Detection
GWC-11	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	V01	Detection
GWC-12	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWA-13	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWA-14	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-15 (*GWB-15)	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWA-16 (*GWB-16)	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-17	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-18	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	V01	Detection
GWC-19	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	V01	Detection
GWC-20	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-21	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	D01	--	Detection
GWC-22 ⁽¹⁾ (*PZ-22)	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	--	--	--	--	Detection
GWC-23	Downgradient	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	--	Detection

Notes:

BGXX = Background Event and Number

DXX = Detection Event Number

VXX = Verification Event

-- = Not sampled

⁽¹⁾ Monitoring well GWC-22 was replaced with GWC-23 in May 2016

*Change requested as part of March 2017 Design and Operations Plan Modification

TABLE 3. SUMMARY OF HISTORICAL GROUNDWATER ELEVATIONS

Well ID	Top of Casing Elevation (ft MSL)	Groundwater Elevations (ft MSL)									
		4/19/2016	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
GWC-1	47.06	32.50	33.39	31.89	31.69	32.24	32.76	32.47	32.54	33.07	32.53
GWA-2	53.64	37.51	38.93	36.95	36.81	37.11	37.14	37.16	37.63	38.22	37.52
GWA-3	57.93	39.42	39.72	38.68	38.00	39.12	38.34	38.90	38.35	38.61	39.72
GWC-4A (*GWB-4A)	64.98	NM	NM	40.90	40.40	42.79	39.79	39.89	39.87	40.17	41.23
GWC-5 (*GWB-5)	62.29	37.92	38.80	NM	38.49	38.88	37.97	37.46	38.16	38.34	39.25
GWC-9	53.56	25.62	25.83	25.66	25.23	25.26	25.02	25.18	25.07	25.02	25.56
GWC-10	49.55	25.55	25.79	25.49	25.28	25.44	25.16	25.25	25.32	25.19	25.47
GWC-11	57.97	25.33	25.51	25.24	25.06	25.27	25.05	25.14	24.15	25.08	25.29
GWC-12	57.26	30.82	31.78	30.78	30.37	30.89	30.62	31.03	30.91	31.12	31.49
GWA-13	60.85	NM	36.48	36.70	36.73	36.90	36.44	36.41	36.55	36.44	37.00
GWA-14	61.40	36.08	NM	36.85	36.93	37.11	36.76	36.81	36.94	36.71	37.19
GWC-15 (*GWB-15)	56.72	35.53	36.31	36.57	36.32	36.60	36.31	36.59	36.63	36.50	37.07
GWA-16 (*GWB-16)	54.60	31.36	32.11	31.53	31.32	31.62	31.49	31.71	31.82	31.84	31.98
GWC-17	54.19	27.96	28.59	27.68	27.49	27.88	27.63	27.86	28.02	27.96	28.12
GWC-18	59.68	24.65	24.74	23.64	24.48	24.58	24.41	24.51	24.44	24.38	24.57
GWC-19	53.62	24.70	24.78	24.60	24.42	24.45	24.28	23.76	24.30	24.27	24.44
GWC-20	47.23	25.10	25.12	24.99	24.76	24.74	24.57	24.54	24.60	24.56	24.74
GWC-21	45.16	25.09	25.14	25.08	24.81	24.77	24.53	24.59	24.57	24.53	24.76
GWC-22 ⁽¹⁾ (*PZ-22)	51.07	24.26	24.33	24.36	24.07	24.06	23.84	23.86	23.83	23.76	24.05
GWC-23	52.16	NM	24.31	24.35	24.13	24.08	23.84	23.83	23.84	23.76	24.05

Notes:

ft = feet NM = not measured

MSL = mean sea level

⁽¹⁾ Monitoring well GWC-22 was replaced with GWC-23 in May 2016

*Change requested as part of March 2017 Design and Operations Plan Modification

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)
GWA-3	GWC-10	39.72	25.47	0.859	0.3	14.25	1,300	0.011	0.031
GWA-14	GWC-18	37.19	24.57			12.62	760	0.017	0.049
									Avg. (ft/day)
									0.040

Notes:

K = hydraulic conductivity

i = hydraulic gradient

n_e = effective porosity

dh = difference between h_1 and h_2

h_1 and h_2 = groundwater elevation at location 1 and 2

L = distance between locations 1 and 2

ft = feet

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1
		04/20/2016	06/15/2016	08/10/2016	09/27/2016	11/15/2016	1/12/2017	03/01/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.017 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	3.22	3	2.1	2.3	2.4	2.5	2.7	2.6
	Chloride	(250)	6.68	7	7.0	6.4	6.6	7.3	7.5	6.8
	Fluoride	4	ND (0.04 J)	ND	ND	ND	ND	ND	ND (0.11 J)	ND
	Sulfate	(250)	1.79	2	ND (0.96 J)	ND (0.75 J)	ND (0.97 J)	1.7	2.0	1.3
	TDS	(500)	ND	52	10	30	32	52	44	20
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0554	0.046	0.042	0.042	0.042	0.046	0.048	0.046
	Beryllium	0.004	ND	ND (0.00012 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0011 J)	ND (0.0015 J)	ND (0.0018 J)	ND (0.0019 J)	ND (0.0012 J)	0.0049	ND
	Cobalt	N/R	ND	ND (0.0015 J)	ND (0.0016 J)	ND (0.0016 J)	ND (0.0015 J)	ND (0.0016 J)	ND (0.0021 J)	ND (0.0018 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0013 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND (0.000084 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.839 U	0.997	0.861	0.647	0.985	0.522	1.12
Selenium	0.05	ND	ND	ND	ND	ND	ND (0.00035 J)	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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWA-2	GWA-2	GWA-2	GWA-2	GWA-2	GWA-2	GWA-2	GWA-2	GWA-2
		04/19/2016	06/14/2016	08/09/2016	09/26/2016	11/15/2016	01/10/2017	02/28/2017	04/19/2017	
APPENDIX III	Boron	N/R	ND	ND (0.012 J)	ND	ND	ND	ND	ND (0.022 J)	ND
	Calcium	N/R	ND (0.485 J)	0.72	ND (0.24 J)	0.48	0.54	0.62	0.91	0.75
	Chloride	(250)	5.01	5	5.1	5.1	5.2	4.9	4.7	4.4
	Fluoride	4	ND (0.03 J)	ND (0.02 J)	ND	ND	ND	ND	ND (0.11 J)	ND
	Sulfate	(250)	1.27	1.7	ND	ND	ND	ND (0.83 J)	ND (0.99 J)	ND (0.97 J)
	TDS	(500)	ND	55	6.0	24	38	18	12	14
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0305	0.03	0.032	0.031	0.033	0.031	0.033	0.032
	Beryllium	0.004	ND	ND (0.000065 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0017 J)	ND (0.0014 J)	ND (0.0016 J)	ND (0.0015 J)	ND (0.0015 J)	0.0044	ND (0.0011 J)
	Cobalt	N/R	ND	ND (0.001 J)	ND (0.0012 J)	ND (0.0012 J)	ND (0.0013 J)	ND (0.0011 J)	ND (0.0014 J)	ND (0.0012 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0012 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND	ND	ND (0.00014 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0014 J)
	Radium	5	ND	0.877	0.983	1.03	0.603	0.883	0.369 U	0.744
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.00065 J)	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWA-3	GWA-3	GWA-3	GWA-3	GWA-3	GWA-3	GWA-3	GWA-3	GWA-3
		04/19/2016	06/14/2016	08/09/2016	09/27/2016	11/14/2016	01/10/2017	02/28/2017	04/19/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0077 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	1.13	1	0.71	0.77	0.75	0.73	0.76	0.69
	Chloride	(250)	9.4	8.3	8.6	6.3	6.1	6.1	6.2	5.0
	Fluoride	4	ND (0.022 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	1.03	ND (0.88 J)	ND	ND (0.90 J)	ND	1.2	1.1	ND
	TDS	(500)	ND	46	18	30	26	18	22	14
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND (0.00061 J)	ND (0.00069 J)
	Barium	2	0.0217	0.024	0.023	0.016	0.014	0.015	0.017	0.013
	Beryllium	0.004	ND	ND (0.000032 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.00085 J)	ND	ND	ND (0.0011 J)	ND (0.0012 J)	0.0040	ND (0.0011 J)
	Cobalt	N/R	ND	ND (0.00044 J)	ND (0.00042 J)	ND (0.00042 J)	ND	ND	ND (0.00048 J)	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0017 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00010 J)	ND	ND	ND	ND (0.00016 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND (0.0066 J)	ND (0.0036 J)
	Radium	5	ND	1.43	0.485	0.866	0.474 U	0.764	0.619	0.449
Selenium	0.05	ND	ND	ND	ND (0.00045 J)	ND	ND	0.0027	0.0020	
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.
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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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A
		04/20/2016	06/14/2016	08/11/2016	09/27/2016	11/14/2016	01/10/2017	02/28/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.01 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	1.12	1.1	1.9	3.4	3.1	1.5	1.1	0.98
	Chloride	(250)	2.93	2.9	3.6	3.4	4.2	3.6	3.3	3.5
	Fluoride	4	ND (0.028 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	7.31	8.6	3.7	4.6	7.4	4.7	4.1	5.9
	TDS	(500)	ND	67	ND	28	48	22	32	20
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00016 J)	ND (0.00096 J)	0.0026	0.0017	0.0021	0.0027	0.0014
	Barium	2	0.0234	0.019	0.024	0.035	0.034	0.021	0.021	0.019
	Beryllium	0.004	ND	ND (0.000087 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.000111 J)	ND (0.00013 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0013 J)	ND	ND	ND	ND	0.0048	ND
	Cobalt	N/R	ND	ND (0.0004 J)	0.0046	ND (0.0010 J)	ND	ND (0.00044 J)	ND (0.0010 J)	ND (0.00059 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.002 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND (0.00014 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND (0.0059 J)	ND
	Radium	5	ND	0.679 U	0.303 U	0.400 U	0.636	0.204 U	0.532	0.261 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	0.0024	ND
Thallium	0.002	ND	ND (0.000036 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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5
		04/20/2016	06/14/2016	08/09/2016	09/27/2016	11/15/2016	01/11/2017	02/28/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.011 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	4.39	2.4	2.0	2.9	2.5	2.5	2.7	2.8
	Chloride	(250)	3.69	3.5	3.7	3.6	3.7	3.5	3.3	3.3
	Fluoride	4	ND (0.032 J)	ND	ND	ND	ND	ND	ND (0.11 J)	ND
	Sulfate	(250)	ND (0.367 J)	ND (0.48 J)	ND	ND	ND	ND	ND	ND
	TDS	(500)	ND	62	6.0	10	32	12	ND	34
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00005 J)	ND	ND	ND	ND	ND	ND
	Barium	2	0.0553	0.035	0.035	0.038	0.039	0.037	0.042	0.040
	Beryllium	0.004	ND	ND (0.000054 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0011 J)	ND	ND	ND	ND	0.0054	ND (0.0013 J)
	Cobalt	N/R	ND	ND (0.0006 J)	ND (0.00062 J)	ND (0.00059 J)	ND (0.00064 J)	ND (0.00064 J)	ND (0.00078 J)	ND (0.00065 J)
	Lead	0.015	ND	ND (0.00019 J)	ND	ND	ND	ND	ND	ND (0.00041 J)
	Lithium	N/R	ND	ND (0.0008 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00010 J)	ND	ND	ND	ND (0.00012 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND (0.0015 J)	ND
	Radium	5	ND	0.707 U	0.806	0.845	0.965	1.84	0.479	0.519
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.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9	GWC-9
		04/19/2016	06/15/2016	08/10/2016	09/27/2016	11/15/2016	01/13/2017	03/01/2017	04/24/2017	
APPENDIX III	Boron	N/R	ND	ND (0.018 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	ND (0.431 J)	ND (0.27 J)	ND (0.13 J)	ND (0.21 J)	0.27	0.41	0.25	0.34
	Chloride	(250)	14.4	12	13	12	11	11	11	9.3
	Fluoride	4	ND (0.02 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	3.84	3.8	1.6	ND (0.91 J)	ND	ND	1.5	1.2
	TDS	(500)	49	84	44	30	32	54	34	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND (0.00055 J)	ND	ND
	Barium	2	0.0274	0.024	0.031	0.029	0.029	0.025	0.030	0.024
	Beryllium	0.004	ND	ND (0.000077 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.00021 J)	ND	ND	ND	ND (0.0012 J)	0.0043	ND
	Cobalt	N/R	ND	ND (0.00052 J)	ND (0.00060 J)	ND (0.00063 J)	ND (0.00053 J)	ND (0.00052 J)	ND (0.00084 J)	ND (0.00055 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0015 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.00013 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.58	1.33	1.18	1.26	0.588	0.580	1.22	0.707
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.
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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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-10	GWC-10	GWC-10	GWC-10	GWC-10	GWC-10	GWC-10	GWC-10	GWC-10
		04/21/2016	06/16/2016	08/10/2016	09/27/2016	11/15/2016	01/12/2017	03/01/2017	04/24/2017	
APPENDIX III	Boron	N/R	ND	ND (0.017 J)	ND	ND	ND (0.021 J)	ND (0.041 J)	0.052	0.064
	Calcium	N/R	13.9	18.9	13	14	13	14	15	14
	Chloride	(250)	6.41	6	6.8	6.1	6.7	6.5	6.3	6.1
	Fluoride	4	ND (0.217 J)	ND (0.13 J)	0.21	ND (0.17 J)	0.22	ND (0.12 J)	0.25	ND (0.18 J)
	Sulfate	(250)	1.93	2.3	2.9	3.2	3.5	4.2	3.5	3.5
	TDS	(500)	49	109	58	100	94	110	110	32
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.0004 J)	ND	ND	ND	ND (0.00077 J)	ND	ND
	Barium	2	0.0178	0.022	0.015	0.014	0.015	0.015	0.017	0.014
	Beryllium	0.004	ND	ND (0.000085 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.00617 J)	ND (0.007 J)	0.0056	0.0057	0.0062	0.0061	0.010	0.0053
	Cobalt	N/R	ND	ND (0.00001 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0052 J)	0.0055	ND (0.0048 J)	0.0051	ND (0.0044 J)	ND (0.0043 J)	ND (0.0037 J)
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.00010 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.00044 J)	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.876	0.321 U	0.239 U	0.138 U	0.388 U	0.425	0.215 U
Selenium	0.05	ND	ND	ND (0.00026 J)	ND (0.00024 J)	ND	ND	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11	GWC-11
		04/20/2016	06/15/2016	08/10/2016	09/27/2016	11/15/2016	01/12/2017	03/01/2017	04/24/2017	
APPENDIX III	Boron	N/R	ND	ND (0.011 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	8.94	10.6	7.6	8.7	8.4	8.1	8.9	8.8
	Chloride	(250)	4.9	4.6	5.1	4.9	5.0	4.7	4.4	4.4
	Fluoride	4	0.383	ND (0.28 J)	0.42	0.39	0.43	0.41	0.39	0.37
	Sulfate	(250)	4.37	5.7	4.5	4.4	4.4	4.6	4.5	4.0
	TDS	(500)	32	81	64	60	72	84	64	46
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00117 J)	ND (0.0013 J)	0.0013	ND (0.0011 J)	ND (0.0010 J)	0.0016	ND (0.00092 J)	ND (0.0011 J)
	Barium	2	0.0113	0.013	0.010	0.010	0.011	0.010	0.011	0.010
	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 (0.00856 J)	ND (0.0061 J)	0.0052	0.0051	0.0050	0.0051	0.0088	0.0049
	Cobalt	N/R	ND	ND (0.00011 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND (0.0002 J)	ND	ND	ND	ND	ND	ND (0.00037 J)
	Lithium	N/R	ND	ND (0.0037 J)	ND (0.0042 J)	ND (0.0044 J)	0.0052	ND	ND (0.0036 J)	ND
	Mercury	0.002	ND	ND	ND (0.00012 J)	ND	ND (0.000093 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.00076 J)	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.318 U	0.664	0.200 U	0.424	0.675	0.197 U	0.189 U
Selenium	0.05	ND	ND (0.00052 J)	ND (0.00053 J)	ND (0.00047 J)	ND	ND (0.00025 J)	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12	GWC-12
		04/20/2016	06/15/2016	08/10/2016	09/27/2016	11/15/2016	01/12/2017	03/01/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.01 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	0.69	0.69	0.45	0.61	0.61	0.60	0.61	0.65
	Chloride	(250)	3.61	3.3	3.8	3.7	3.9	3.6	3.4	3.5
	Fluoride	4	ND (0.026 J)	ND	ND	ND	ND	ND	ND (0.11 J)	ND
	Sulfate	(250)	ND (0.601 J)	ND (0.8 J)	ND	ND	ND	ND	ND	ND
	TDS	(500)	41	27	6.0	16	22	44	8.0	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND (0.00062 J)	ND	ND
	Barium	2	0.0114	ND (0.0095 J)	0.0094	0.011	0.0096	0.010	0.011	0.010
	Beryllium	0.004	ND	ND (0.00014 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0016 J)	ND (0.0016 J)	ND (0.0019 J)	ND (0.0017 J)	ND (0.0017 J)	0.0055	ND (0.0016 J)
	Cobalt	N/R	ND	ND (0.00051 J)	ND (0.00052 J)	ND (0.00077 J)	ND (0.00055 J)	ND (0.00050 J)	ND (0.00079 J)	ND (0.00056 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0015 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.00014 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.961 U	0.340 U	0.449 U	0.344 U	0.474	0.185 U	0.243 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWA-13	GWA-13	GWA-13	GWA-13	GWA-13	GWA-13	GWA-13	GWA-13	GWA-13
		04/20/2016	06/14/2016	08/09/2016	09/27/2016	11/15/2016	01/12/2017	02/28/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0086 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	ND (0.389 J)	ND (0.37 J)	ND (0.14 J)	0.33	0.28	0.37	0.26	0.27
	Chloride	(250)	3.49	3.4	3.7	3.8	3.8	3.5	3.6	3.4
	Fluoride	4	ND (0.018 J)	ND	ND	ND	ND	ND	ND (0.097 J)	ND
	Sulfate	(250)	ND (0.496 J)	ND (0.62 J)	ND	ND	ND	ND	ND	ND
	TDS	(500)	ND	47	10	16	ND (4.0 J)	26	6.0	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0144	0.015	0.013	0.015	0.015	0.012	0.016	0.015
	Beryllium	0.004	ND	ND (0.000071 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0094 J)	ND	ND	ND	ND	0.0049	ND (0.0011 J)
	Cobalt	N/R	ND	ND (0.00072 J)	ND (0.00041 J)	ND (0.00058 J)	ND (0.00048 J)	ND (0.0014 J)	ND (0.00075 J)	ND (0.00050 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0007 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00012 J)	ND	ND (0.000097 J)	ND	ND (0.00015 J)	ND
	Molybdenum	N/R	ND	ND (0.00027 J)	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.809 U	0.222 U	0.368 U	1.06	0.783	0.572	0.291 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWA-14	GWA-14	GWA-14	GWA-14	GWA-14	GWA-14	GWA-14	GWA-14	GWA-14
		04/20/2016	06/14/2016	08/09/2016	09/27/2016	11/15/2016	01/11/2017	02/28/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0098 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	0.686	0.62	0.39	0.52	0.50	0.47	0.47	0.50
	Chloride	(250)	4.55	4.3	4.5	4.4	4.5	4.3	4.0	4.0
	Fluoride	4	ND (0.021 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	5.85	4.6	2.7	2.0	1.5	1.4	1.1	ND (0.82 J)
	TDS	(500)	ND	65	24	14	18	6.0	14	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0143	0.012	0.011	0.010	0.012	0.011	0.011	0.011
	Beryllium	0.004	ND	ND (0.000044 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND (0.000062 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.00086 J)	ND	ND	ND	ND	0.0047	ND
	Cobalt	N/R	ND	ND (0.00048 J)	ND (0.00045 J)	ND (0.00046 J)	ND	ND	ND (0.00051 J)	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0017 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00012 J)	ND	ND (0.00011 J)	ND	ND (0.000075 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.389 U	0.385 U	0.679	0.395 U	0.500	0.499	0.0471 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
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**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15	GWC-15
		04/21/2016	06/15/2016	08/09/2016	09/27/2016	11/15/2016	01/11/2017	02/28/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0095 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	0.686	0.61	ND (0.21 J)	0.40	0.35	0.34	0.37	0.43
	Chloride	(250)	3.99	3.5	4.0	3.9	4.0	3.8	3.5	3.3
	Fluoride	4	ND (0.019 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	ND (0.503 J)	ND (0.62 J)	ND	ND	ND	ND	ND	ND
	TDS	(500)	ND	58	6.0	16	18	8.0	ND (4.0 J)	10
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0262	0.024	0.023	0.023	0.023	0.022	0.023	0.024
	Beryllium	0.004	ND	ND (0.000038 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0008 J)	ND	ND	ND	ND	0.0051	ND (0.0012 J)
	Cobalt	N/R	ND	ND (0.00047 J)	ND	ND (0.00045 J)	ND (0.00048 J)	ND (0.00046 J)	ND (0.00061 J)	ND (0.00042 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0013 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.000093 J)	ND	ND (0.00016 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.727 U	0.191 U	0.203 U	0.679	0.750	0.448	0.425
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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWA-16	GWA-16	GWA-16	GWA-16	GWA-16	GWA-16	GWA-16	GWA-16	GWA-16
		04/20/2016	06/15/2016	08/09/2016	09/27/2016	11/15/2016	01/11/2017	03/01/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0085 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	ND (0.472 J)	ND (0.42 J)	ND (0.19 J)	0.39	0.39	0.36	0.38	0.41
	Chloride	(250)	3.92	3.8	4.0	3.9	4.0	3.7	3.5	3.6
	Fluoride	4	ND (0.022 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	ND (0.53 J)	ND (0.67 J)	ND	ND	ND	ND	ND	ND
	TDS	(500)	ND	67	ND (4.0 J)	18	26	ND	6.0	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0259	0.024	0.023	0.021	0.023	0.021	0.022	0.022
	Beryllium	0.004	ND	ND (0.00011 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.00072 J)	ND	ND	ND (0.0011 J)	ND (0.0012 J)	0.0052	ND (0.0013 J)
	Cobalt	N/R	ND	ND (0.00063 J)	ND (0.00055 J)	ND (0.00059 J)	ND (0.00050 J)	ND (0.00044 J)	ND (0.00066 J)	ND (0.00045 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0008 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00010 J)	ND	ND (0.000072 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.77 U	0.485	0.651	0.600	0.891	0.234 U	0.310 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
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**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17	GWC-17
		04/20/2016	06/15/2016	08/09/2016	09/27/2016	11/15/2016	01/11/2017	03/01/2017	04/20/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0095 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	2.48	2.2	1.8	1.9	2.1	2.0	2.1	2.0
	Chloride	(250)	4.25	4.1	4.5	4.4	4.5	4.2	3.9	4.0
	Fluoride	4	ND (0.147 J)	ND (0.1 J)	ND (0.16 J)	ND (0.14 J)	ND (0.16 J)	ND (0.16 J)	0.22	ND (0.12 J)
	Sulfate	(250)	2.93	1.8	1.6	1.5	1.3	1.1	1.3	ND (0.77 J)
	TDS	(500)	29	85	ND	6.0	24	20	38	6.0
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00015 J)	ND	ND	ND	ND	ND	ND
	Barium	2	0.0188	0.017	0.018	0.016	0.017	0.017	0.017	0.016
	Beryllium	0.004	ND	ND (0.00056 J)	ND (0.00054 J)	ND (0.00056 J)	ND (0.00047 J)	ND (0.00066 J)	ND (0.00066 J)	ND (0.00055 J)
	Cadmium	0.005	ND (0.000633 J)	ND (0.00055 J)	ND (0.00046 J)	ND (0.00071 J)	ND (0.00056 J)	ND (0.00070 J)	ND (0.00063 J)	ND (0.00055 J)
	Chromium	0.1	ND	ND (0.0018 J)	ND (0.0020 J)	ND (0.0021 J)	ND (0.0020 J)	0.0025	0.0067	ND (0.0024 J)
	Cobalt	N/R	ND	ND (0.00073 J)	ND (0.00069 J)	ND (0.00081 J)	ND (0.00071 J)	ND (0.00062 J)	ND (0.00081 J)	ND (0.00053 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.002 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.0003 J)	ND	ND	ND	ND	ND	ND
	Radium	5	ND	0.532 U	0.272 U	1.03	0.589	0.858	0.184 U	0.437
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND (0.000038 J)	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
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**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-18	GWC-18	GWC-18	GWC-18	GWC-18	GWC-18	GWC-18	GWC-18	GWC-18
		04/19/2016	06/16/2016	08/11/2016	09/28/2016	11/16/2016	01/11/2017	03/01/2017	04/25/2017	
APPENDIX III	Boron	N/R	ND	ND (0.011 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	26	33.2	18	17	17	15	16	17
	Chloride	(250)	5.03	4.7	5.3	5.1	5.2	5.0	4.6	4.6
	Fluoride	4	0.706	0.56	0.74	0.70	0.71	0.51	0.61	0.65
	Sulfate	(250)	4.84	9	5.0	5.1	4.9	5.2	4.6	4.6
	TDS	(500)	106	150	78	43	140	64	88	92
APPENDIX IV	Antimony	0.006	ND	ND (0.00022 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00112 J)	ND (0.0011 J)	ND (0.0010 J)	ND (0.00062 J)	ND (0.00046 J)	ND (0.00093 J)	ND (0.00060 J)	ND (0.0011 J)
	Barium	2	0.0308	0.029	0.023	0.024	0.022	0.017	0.020	0.020
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND (0.000085 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.00277 J)	ND (0.0021 J)	ND (0.0023 J)	ND (0.0022 J)	ND (0.0019 J)	0.0025	0.0065	0.0026
	Cobalt	N/R	ND	ND (0.00017 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND (0.00015 J)	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0034 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.0012 J)	ND	ND	ND	ND	ND	ND (0.0010 J)
	Radium	5	ND	1.08	0.300 U	-0.0326 U	0.719	0.438 U	0.131 U	0.056 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	
Thallium	0.002	ND	ND (0.00013 J)	ND (0.00011 J)	ND (0.00012 J)	ND	ND (0.000095 J)	ND (0.00011 J)	ND (0.00012 J)	

Notes:

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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 COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-19	GWC-19	GWC-19	GWC-19	GWC-19	GWC-19	GWC-19	GWC-19	GWC-19
		04/19/2016	06/16/2016	08/10/2016	09/28/2016	11/15/2016	01/16/2017	03/01/2017	04/25/2017	
APPENDIX III	Boron	N/R	ND	ND (0.0069 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	10.3	10.4	6.7	6.9	7.5	8.0	8.5	8.2
	Chloride	(250)	6.1	5.7	6.2	6.9	7.8	8.6	8.3	8.4
	Fluoride	4	ND (0.122 J)	ND (0.08 J)	ND (0.14 J)	ND (0.11 J)	ND (0.13 J)	ND (0.11 J)	ND (0.18 J)	ND (0.087 J)
	Sulfate	(250)	2.21	2.5	2.7	2.5	2.2	2.1	1.9	1.6
	TDS	(500)	34	34	32	13	64	12	72	62
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00026 J)	ND	ND	ND	ND (0.00067 J)	ND	ND
	Barium	2	0.023	0.017	0.013	0.013	0.013	0.014	0.017	0.015
	Beryllium	0.004	ND	ND (0.00011 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.00017 J)	ND (0.00018 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0016 J)	ND (0.0016 J)	ND	ND	ND (0.0013 J)	0.0056	ND (0.0019 J)
	Cobalt	N/R	ND	ND (0.000067 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.002 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.000078 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.00043 J)	ND	ND	ND	ND	ND	ND (0.0019 J)
	Radium	5	ND	0.665 U	-0.02 U	0.0127 U	0.532	0.371 U	0.356 U	0.0921 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.00052 J)	
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20	GWC-20
		04/21/2016	06/16/2016	08/10/2016	09/27/2016	11/15/2016	01/13/2017	03/01/2017	04/25/2017	
APPENDIX III	Boron	N/R	ND	ND (0.012 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	2.29	2.4	1.4	1.4	1.3	1.3	1.4	1.4
	Chloride	(250)	11.6	10	10	8.9	8.5	8.3	7.9	8.2
	Fluoride	4	ND (0.06 J)	ND	ND	ND	ND	ND (0.083 J)	ND (0.12 J)	ND
	Sulfate	(250)	5.25	3.9	2.8	2.6	1.9	1.8	1.7	1.3
	TDS	(500)	28	42	6.0	20	82	36	40	14
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00014 J)	ND	ND	ND	ND	ND	ND (0.00046 J)
	Barium	2	0.0325	0.027	0.025	0.023	0.022	0.021	0.021	0.020
	Beryllium	0.004	ND	ND (0.00032 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.00052 J)	ND (0.00044 J)	ND	ND	ND	ND (0.00036 J)	ND	ND
	Chromium	0.1	ND	ND (0.0008 J)	ND	ND	ND	ND	0.0050	ND
	Cobalt	N/R	ND (0.00468 J)	ND (0.0032 J)	0.0025	ND (0.0023 J)	ND (0.0019 J)	ND (0.0017 J)	ND (0.0021 J)	ND (0.0016 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0017 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.000073 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0035 J)
	Radium	5	ND	0.635 U	0.395 U	0.578	0.586	0.455	0.704	0.116 U
Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	0.0021	
Thallium	0.002	ND	ND (0.000052 J)	ND	ND	ND	ND	ND	ND	

Notes:

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

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21	GWC-21
		04/21/2016	06/16/2016	08/10/2016	09/27/2016	11/15/2016	01/12/2017	03/01/2017	04/24/2017	
APPENDIX III	Boron	N/R	ND	ND (0.012 J)	ND	ND	ND	ND	ND	ND
	Calcium	N/R	2.78	2.9	0.99	1.3	1.1	0.93	1.0	1.1
	Chloride	(250)	6.08	5.8	6.5	6.4	6.4	6.3	5.9	5.9
	Fluoride	4	ND (0.022 J)	ND	ND	ND	ND	ND	ND (0.10 J)	ND
	Sulfate	(250)	1.99	1.6	1.1	1.1	1.0	1.2	1.2	ND (0.95 J)
	TDS	(500)	ND	30	ND	14	58	38	32	16
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00046 J)	ND	ND (0.00084 J)	ND	ND	ND	ND
	Barium	2	0.0165	0.018	0.014	0.018	0.015	0.014	0.015	0.015
	Beryllium	0.004	ND	ND	ND	ND (0.00064 J)	ND	ND	ND	ND
	Cadmium	0.005	ND	ND (0.00012 J)	ND	ND (0.00062 J)	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.00031 J)	ND	0.35	ND	ND	0.0044	ND
	Cobalt	N/R	ND	ND (0.0021 J)	ND (0.0015 J)	0.015	ND (0.0017 J)	ND (0.0014 J)	ND (0.0019 J)	ND (0.0015 J)
	Lead	0.015	ND	ND	ND	ND (0.00079 J)	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.00088 J)	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.00018 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND (0.0034 J)	ND	ND	ND	ND
	Radium	5	ND	0.708 U	0.342 U	0.714	0.726	0.344 U	1.12	0.308 U
Selenium	0.05	ND	ND	ND	ND (0.00043 J)	ND	ND	ND	ND	
Thallium	0.002	ND	ND (0.000027 J)	ND	ND (0.00016 J)	ND	ND	ND	ND	

Notes:

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4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
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6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID						
		GWC-22	GWC-22	GWC-22	GWC-22	GWC-22	GWC-22	GWC-22
		04/21/2016	06/16/2016	08/11/2016	09/28/2016	11/16/2016		
APPENDIX III	Boron	N/R	ND	ND (0.015 J)	ND	ND	ND	See Note 10.
	Calcium	N/R	27.3	22.2	14	19	16	
	Chloride	(250)	4.34	4.5	4.4	4.2	4.2	
	Fluoride	4	0.3220	ND (0.18 J)	0.24	0.21	0.22	
	Sulfate	(250)	11.2	4.6	7.5	8.6	8.9	
	TDS	(500)	108	128	84	51	150	
APPENDIX IV	Antimony	0.006	ND	ND (0.00019 J)	ND	ND	ND	
	Arsenic	0.01	ND (0.00422 J)	ND (0.0031 J)	ND (0.00082 J)	0.0014	ND (0.00060 J)	
	Barium	2	0.0996	0.063	0.047	0.074	0.061	
	Beryllium	0.004	ND	ND (0.000031 J)	ND	ND	ND	
	Cadmium	0.005	ND	ND (0.000082 J)	ND (0.00059 J)	ND	ND	
	Chromium	0.1	ND	ND (0.00018 J)	ND	ND	ND	
	Cobalt	N/R	ND (0.00494 J)	ND (0.0035 J)	ND (0.0010 J)	0.0025	ND (0.0020 J)	
	Lead	0.015	ND	ND	ND	ND	ND	
	Lithium	N/R	ND	ND (0.0032 J)	ND	ND (0.0036 J)	ND	
	Mercury	0.002	ND	ND	ND	ND	ND	
	Molybdenum	N/R	ND (0.00285 J)	ND (0.0038 J)	ND (0.0014 J)	ND (0.0017 J)	ND (0.0013 J)	
	Radium	5	0.00 U	1.54	0.645	0.434 U	1.24	
Selenium	0.05	ND	ND	ND	ND	ND		
Thallium	0.002	ND	ND (0.000033 J)	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.
10. Well no longer sampled as part of background monitoring due to well replacement

**TABLE 5. PLANT McINTOSH COAL COMBUSTION BY-PRODUCT LANDFILL No. 4
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		GWC-23	GWC-23	GWC-23	GWC-23	GWC-23	GWC-23	GWC-23	GWC-23	GWC-23
		06/16/2016	08/10/2016	09/28/2016	11/16/2016	01/17/2017	03/02/2017	04/25/2017	07/13/2017	
APPENDIX III	Boron	N/R	ND (0.017 J)	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	15.6	10	8.5	8.4	3.0	3.3	2.5	2.1
	Chloride	(250)	5.1	4.4	4.0	4.1	4.3	4.0	4.1	4.2
	Fluoride	4	ND (0.04 J)	ND	ND (0.097 J)	ND (0.092 J)	ND	ND (0.12 J)	ND	ND
	Sulfate	(250)	9.2	3.1	3.1	3.2	2.6	3.3	2.4	2.1
	TDS	(500)	78	88	35	98	36	38	28	20
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00043 J)	0.0021	ND (0.0011 J)	ND (0.0011 J)	ND (0.00064 J)	ND	ND (0.00070 J)	ND
	Barium	2	0.057	0.072	0.076	0.057	0.049	0.067	0.049	0.040
	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 (0.00023 J)	ND	ND	ND	ND	ND (0.0017 J)	ND	ND
	Cobalt	N/R	ND (0.0019 J)	0.0051	0.0058	0.0063	0.0057	0.0095	0.0078	0.0061
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.001 J)	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.00013 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.0015 J)	ND (0.00089 J)	ND	ND	ND	ND	ND	ND
	Radium	5	0.920	0.392 U	-0.338 U	0.456	0.696	0.291 U	0.429	0.450
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: 102935 CCR - McIntosh #4

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

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SAMPLE SUMMARY

Workorder: 102935 CCR - McIntosh #4

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
102935001	GWA-3	N/A	Water	4/19/2016 15:05	4/20/2016 10:30
102935002	GWA-2	N/A	Water	4/19/2016 16:50	4/20/2016 10:30
102935003	GWC-9	N/A	Water	4/19/2016 17:05	4/20/2016 10:30
102935004	GWC-19	N/A	Water	4/19/2016 14:54	4/20/2016 10:30
102935005	GWC-18	N/A	Water	4/19/2016 15:05	4/20/2016 10:30

Report ID: 102935 - 5032039
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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935001	Date Received:	4/20/2016 10:30
Sample ID:	GWA-3	Date Collected:	4/19/2016 15:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 17:58	MRP	
Calcium	1.13	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 17:58	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:40	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Barium	0.0217	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 15:39	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 15:53	LBB	
Sulfate	1.03	mg/L	0.3000	1.00			4/26/2016 06:17	LBB	
Chloride	9.40	mg/L	0.2000	1.25			4/26/2016 15:53	LBB	
Fluoride	0.0220J	mg/L	0.0100	0.3000			4/26/2016 06:17	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935001	Date Received:	4/20/2016 10:30
Sample ID:	GWA-3	Date Collected:	4/19/2016 15:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935002	Date Received:	4/20/2016 10:30
Sample ID:	GWA-2	Date Collected:	4/19/2016 16:50
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 18:04	MRP	
Calcium	0.485J	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 18:04	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:42	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Barium	0.0305	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 15:53	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 08:13	LBB	
Sulfate	1.27	mg/L	0.3000	1.00			4/26/2016 08:13	LBB	
Chloride	5.01	mg/L	0.0800	0.5000			4/26/2016 16:32	LBB	
Fluoride	0.0300J	mg/L	0.0100	0.3000			4/26/2016 08:13	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935002	Date Received:	4/20/2016 10:30
Sample ID:	GWA-2	Date Collected:	4/19/2016 16:50
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935003	Date Received:	4/20/2016 10:30
Sample ID:	GWC-9	Date Collected:	4/19/2016 17:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 18:10	MRP	
Calcium	0.431J	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 18:10	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:45	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Barium	0.0274	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:16	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 17:10	LBB	
Sulfate	3.84	mg/L	0.3000	1.00			4/26/2016 08:51	LBB	
Chloride	14.4	mg/L	0.4000	2.50			4/26/2016 17:10	LBB	
Fluoride	0.0200J	mg/L	0.0100	0.3000			4/26/2016 08:51	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935003	Date Received:	4/20/2016 10:30
Sample ID:	GWC-9	Date Collected:	4/19/2016 17:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	49	mg/L	25	25			4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID: 102935004 **Date Received:** 4/20/2016 10:30
Sample ID: GWC-19 **Date Collected:** 4/19/2016 14:54
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 18:52	MRP	
Calcium	10.3	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 18:52	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:48	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Cadmium	0.000170J	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Barium	0.0230	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:21	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 17:49	LBB	
Sulfate	2.21	mg/L	0.3000	1.00			4/26/2016 09:29	LBB	
Chloride	6.10	mg/L	0.2000	1.25			4/26/2016 17:49	LBB	
Fluoride	0.1220J	mg/L	0.0100	0.3000			4/26/2016 09:29	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935004	Date Received:	4/20/2016 10:30
Sample ID:	GWC-19	Date Collected:	4/19/2016 14:54
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	34	mg/L	25	25			4/22/2016 09:33	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935005	Date Received:	4/20/2016 10:30
Sample ID:	GWC-18	Date Collected:	4/19/2016 15:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 18:58	MRP	
Calcium	26.0	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 18:58	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:50	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Chromium	0.00277J	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Arsenic	0.00112J	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Barium	0.0308	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:26	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 18:27	LBB	
Sulfate	4.84	mg/L	0.3000	1.00			4/26/2016 10:08	LBB	
Chloride	5.03	mg/L	0.0800	0.5000			4/26/2016 18:27	LBB	
Fluoride	0.7060	mg/L	0.0100	0.3000			4/26/2016 10:08	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102935 CCR - McIntosh #4

Lab ID:	102935005	Date Received:	4/20/2016 10:30
Sample ID:	GWC-18	Date Collected:	4/19/2016 15:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	106	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 102935 CCR - McIntosh #4

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: 102935 CCR - McIntosh #4

QC Batch: DIGM/4271 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 102935001 102935002 102935003 102935004 102935005

METHOD BLANK: 105213

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: 105214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Lithium	mg/L	0.2	0.217	109	80-120
Beryllium	mg/L	0.1	0.104	104	80-120
Boron	mg/L	0.1	0.112	112	80-120
Chromium	mg/L	0.1	0.107	107	80-120
Cobalt	mg/L	0.1	0.108	108	80-120
Arsenic	mg/L	0.1	0.104	104	80-120
Selenium	mg/L	0.1	0.103	103	80-120
Molybdenum	mg/L	0.1	0.104	104	80-120
Cadmium	mg/L	0.1	0.105	105	80-120
Antimony	mg/L	0.1	0.106	106	80-120
Barium	mg/L	0.1	0.103	103	80-120
Thallium	mg/L	0.1	0.0976	97.6	80-120
Lead	mg/L	0.1	0.105	105	80-120

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105215 105216 Original: 102935001

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	0.00209	0.2	0.213	0.217	105	107	75-125	1.9	20	
Beryllium	mg/L	8.8e-005	0.1	0.102	0.104	102	104	75-125	1.9	20	
Boron	mg/L	0.016	0.1	0.121	0.123	105	107	75-125	1.9	20	
Chromium	mg/L	0.00121	0.1	0.110	0.109	109	107	75-125	1.9	20	
Cobalt	mg/L	0.00049	0.1	0.110	0.108	109	108	75-125	0.92	20	
Arsenic	mg/L	6.5e-005	0.1	0.106	0.105	106	105	75-125	0.95	20	
Selenium	mg/L	0.00087	0.1	0.104	0.105	104	104	75-125	0	20	
Molybdenum	mg/L	2.5e-005	0.1	0.105	0.105	105	105	75-125	0	20	
Cadmium	mg/L	2.7e-005	0.1	0.107	0.105	107	105	75-125	1.9	20	
Antimony	mg/L	0.00018	0.1	0.108	0.106	108	106	75-125	1.9	20	
Barium	mg/L	0.0217	0.1	0.128	0.126	106	104	75-125	1.9	20	
Thallium	mg/L	3.3e-005	0.1	0.0979	0.0967	97.9	96.6	75-125	1.3	20	
Lead	mg/L	8.9e-005	0.1	0.106	0.105	106	105	75-125	0.95	20	

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

QC Batch: DIGM/4273 Analysis Method: EPA 6010D
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 102935001 102935002 102935003 102935004 102935005

METHOD BLANK: 105221

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

LABORATORY CONTROL SAMPLE: 105222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
INORGANICS					
Calcium	mg/L	5	5.11	102	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105223 105224 Original: 102935003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	0.431	5	5.55	5.54	102	102	75-125	0	20	

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

QC Batch: GRAV/2847 Analysis Method: SM 2540C
 QC Batch Method: SM 2540C
 Associated Lab Samples: 102935001 102935002 102935003 102935004

METHOD BLANK: 105242

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

LABORATORY CONTROL SAMPLE: 105244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	242	100	90-110	

SAMPLE DUPLICATE: 105243 Original: 102931001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	1290	1310	1.5	20	

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

QC Batch: HGPR/1648 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A
 Associated Lab Samples: 102935001 102935002 102935003 102935004 102935005

METHOD BLANK: 105248

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

METHOD BLANK: 105254

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

LABORATORY CONTROL SAMPLE: 105249

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

LABORATORY CONTROL SAMPLE: 105250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0127	104	80-120	

LABORATORY CONTROL SAMPLE: 105255

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00203	102	80-120	

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105251 105252 Original: 102940004

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	4.5e-006	0.002	0.00204	0.00203	102	101	80-120	0.99	20	

SAMPLE DUPLICATE: 105253 Original: 102940005

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: 102935 CCR - McIntosh #4

QC Batch: IC/3017 Analysis Method: EPA 300
 QC Batch Method: EPA 300
 Associated Lab Samples: 102935001 102935002 102935003 102935004 102935005

METHOD BLANK: 105291

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

METHOD BLANK: 105302

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: 105292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	0.5	0.4980	99.6	90-110
Sulfate	mg/L	5	4.94	98.7	90-110
Fluoride	mg/L	0.5	0.5180	104	90-110

LABORATORY CONTROL SAMPLE: 105303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	0.5	0.4950	99	90-110
Sulfate	mg/L	5	4.95	99	90-110
Fluoride	mg/L	0.5	0.5170	103	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105297 105298 Original: 102935001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.022	1	1.03	1.02	101	100	90-110	1	10	

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105299 105300 Original: 102935001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	1.03	10	10.8	10.9	97.3	98.3	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105304 Original: 102940006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0.009	1	1.02		101	0	90-110	0	0	

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QUALITY CONTROL DATA

Workorder: 102935 CCR - McIntosh #4

QC Batch: GRAV/2850 Analysis Method: SM 2540C
 QC Batch Method: SM 2540C
 Associated Lab Samples: 102935005

METHOD BLANK: 105316

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

LABORATORY CONTROL SAMPLE: 105318

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	234	97.1	90-110	

SAMPLE DUPLICATE: 105317 Original: 102935005

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	106	111	4.6	20	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 102935 CCR - McIntosh #4

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
102935001	GWA-3	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102935002	GWA-2	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102935003	GWC-9	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102935004	GWC-19	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102935005	GWC-18	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102935001	GWA-3	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102935002	GWA-2	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102935003	GWC-9	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102935004	GWC-19	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102935005	GWC-18	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102935001	GWA-3	SM 2540C	GRAV/2847		
102935002	GWA-2	SM 2540C	GRAV/2847		
102935003	GWC-9	SM 2540C	GRAV/2847		
102935004	GWC-19	SM 2540C	GRAV/2847		
102935001	GWA-3	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102935002	GWA-2	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102935003	GWC-9	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102935004	GWC-19	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102935005	GWC-18	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102935001	GWA-3	EPA 300	IC/3017		
102935002	GWA-2	EPA 300	IC/3017		
102935003	GWC-9	EPA 300	IC/3017		
102935004	GWC-19	EPA 300	IC/3017		
102935005	GWC-18	EPA 300	IC/3017		
102935005	GWC-18	SM 2540C	GRAV/2850		

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LABORATORY CERTIFICATIONS

Workorder: 102935 CCR - McIntosh #4

Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Seal ID: 2016049-02

Company: Southern Company Services
 Report To: Joju Abraham
 Address: 241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308

Sample Shipment Date: 8/4/19/16

Sampled By: Stephanic Guir (SG), Amenda Sterner (AS)
 Print Name

Signature

Sample Received Date: 11
 Sample Received By: 11

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

Account Number: 6
 Special Instructions: 7 McIntosh X 4 CCR GW

LAB USE ONLY

Work Order No. 102935
 Reviewed By: AR 4-21-16

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13 Standard Turnaround Time

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

PRESERVATIVE 21		ANALYSIS REQUESTED 22		Sample Type Key: 23	
H ₂ O ₃	Ice	H ₂ O ₃		G-Grab	C-Composite
I	N	I	N	O-Other	
Matrix Key: 24				Matrix Key: 25	
SW-Surface Water				H-Hydrochloric Acid	
GW-Ground Water				N-Nitric Acid	
S-Solid				S-Sulfuric Acid	
SL-Sludge				SH-Sodium Hydroxide	
W-Wipe				P-Phosphoric Acid	
DW-Drinking Water				ST-Sodium Thiosulfate	
LD-Liquid				I-Ice	
				U-Unpreserved	
				O-Other (Specify)	
LAB USE ONLY 26					
Comments					

18	19	20
Sample Type	Matrix	No. of Containers
G	GW	3
G	GW	3
G	GW	3

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16		Sample Description 17
		Date	Time	
<u>102935001</u>	<u>GWA-X3</u>	<u>4/19/16</u>	<u>1505</u>	<u>Landfill #4</u>
<u>2</u>	<u>GWA-2</u>	<u>4/19/16</u>	<u>1650</u>	<u>Landfill #4</u>
<u>3</u>	<u>GWG-9</u>	<u>4/19/16</u>	<u>1705</u>	<u>Landfill #4</u>

FOR CHAIN OF CUSTODY USE ONLY 27		LAB USE ONLY: Sample Receipt Information 30	
Relinquished by: 28	Date/Time	34°C (60EL-IA-3P) ice, cooler in good condition, seal intact, pH 2	
Received by: 29	Date/Time	Fedex # 7828 7402 6654	
Relinquished by:	Date/Time		
Received by:	Date/Time		

Georgia Power Environmental Laboratory
 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. 102935
 Reviewed By: RA 4-21-16

12 Page 1 of 1

13 Standard Turnaround Time

Standard Turnaround Time

Company: 1 Southern Company Services Sample Shipment Date: 8/4/19/16

Report To: Soju Abraham

Address: 2 241 Ralph McGill Blvd SE B0185
Atlanta, GA 30308
 Sampled By: 9 Stephenie Gurr (SG) Myles Reyes (MR) Tracy Warden (TW), Amanda Skermer (AS)

Phone/Fax: 3 404-506-7239 Signature: [Signature]
 Sample Received Date: 10

Contact: 4 Soju Abraham Sample Received By: 11

Project Location: 5 Plant McIntosh LF #4 Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

Account Number: 6

Special Instructions: 7 McIntosh #4 CR GW

PRESERVATIVE 21		ANALYSIS REQUESTED 22	
HM3 N	Ice I	HM3 N	W
Sample Type Key: 23 G-Grab O-Other C-Composite Matrix Key: 24 SW-Surface Water GM-Ground Water VM-Waste Water DM-Drinking Water LW-Liquid Preservative Key: 25 H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid I-Ice U-Unpreserved O-Other (Specify)			

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16		Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20
		Date	Time				
<u>10293504</u>	<u>6WLC-19</u>	<u>4/19/16</u>	<u>1454</u>	<u>Landfill #4</u>	<u>G</u>	<u>GW</u>	<u>3</u>
<u>5</u>	<u>6WLC-18</u>	<u>4/19/16</u>	<u>1505</u>	<u>Landfill #4</u>	<u>G</u>	<u>GW</u>	<u>3</u>

LAB USE ONLY 26 Comments
<u>TW</u>
<u>MR</u>

FOR CHAIN OF CUSTODY USE ONLY 27

Relinquished by: 28 [Signature] Date/Time: 4/19/16 1830 3.2°C (GPEL-IA-3P) ice, cooler in good condition, seal intact, pH=2

Received by: 29 [Signature] Date/Time: 4-20-16 01030 Findex # 8093 9866 4243

Relinquished by: 27 [Signature] Date/Time: 4/19/16

Received by: 347156B Date/Time: 4/19/16

WHITE, CANARY & PINK — Laboratory GOLDENROD — Originator (See Back For Instructions)

Sample Receipt Checklist



Client: McIntosh
 Workorder No.: 102935
 Carrier: FEDEX

of Samples: 5
 Tracking No: 782874026654

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	3.4
COC is present	True	
COC is filled out in ink and is legible	True	Mark through present on sample id GWA-3.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

May 27, 2016

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

RE: Workorder: 102940 CCR - McIntosh #4

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

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SAMPLE SUMMARY

Workorder: 102940 CCR - McIntosh #4

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
102940001	GWC-4	N/A	Water	4/20/2016 10:47	4/21/2016 10:30
102940002	GWC-13	N/A	Water	4/20/2016 13:38	4/21/2016 10:30
102940003	DUP-1	N/A	Water	4/20/2016 00:00	4/21/2016 10:30
102940004	GWC-5	N/A	Water	4/20/2016 12:05	4/21/2016 10:30
102940005	GWC-14	N/A	Water	4/20/2016 15:15	4/21/2016 10:30
102940006	FB-1	N/A	Water	4/20/2016 16:40	4/21/2016 10:30
102940007	FERB-1	N/A	Water	4/20/2016 16:50	4/21/2016 10:30
102940008	GWC-16	N/A	Water	4/20/2016 11:30	4/21/2016 10:30
102940009	GWC-1	N/A	Water	4/20/2016 14:20	4/21/2016 10:30
102940010	DUP-2	N/A	Water	4/20/2016 00:00	4/21/2016 10:30
102940011	GWC-17	N/A	Water	4/20/2016 11:09	4/21/2016 10:30
102940012	GWC-12	N/A	Water	4/20/2016 13:24	4/21/2016 10:30
102940013	GWC-11	N/A	Water	4/20/2016 15:40	4/21/2016 10:30

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940001	Date Received:	4/21/2016 10:30
Sample ID:	GWC-4	Date Collected:	4/20/2016 10:47
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 19:04	MRP	
Calcium	1.12	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 19:04	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 12:53	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:53	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Cadmium	0.000111J	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Barium	0.0234	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:30	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 10:46	LBB	
Sulfate	7.31	mg/L	0.3000	1.00			4/26/2016 10:46	LBB	
Chloride	2.93	mg/L	0.0400	0.2500			4/26/2016 10:46	LBB	
Fluoride	0.0280J	mg/L	0.0100	0.3000			4/26/2016 10:46	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940002	Date Received:	4/21/2016 10:30
Sample ID:	GWC-13	Date Collected:	4/20/2016 13:38
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 19:10	MRP	
Calcium	0.389J	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 19:10	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 12:56	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:56	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Barium	0.0144	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:35	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/27/2016 14:15	LBB	
Sulfate	0.4960J	mg/L	0.3000	1.00			4/26/2016 11:24	LBB	
Chloride	3.49	mg/L	0.2000	1.25			4/27/2016 14:15	LBB	
Fluoride	0.0180J	mg/L	0.0100	0.3000			4/26/2016 11:24	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940003	Date Received:	4/21/2016 10:30
Sample ID:	DUP-1	Date Collected:	4/20/2016 00:00
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 19:16	MRP	
Calcium	0.392J	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 19:16	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 12:58	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Barium	0.0149	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:40	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							4/26/2016 19:05	LBB	
Sulfate	0.4950J	mg/L	0.3000	1.00			4/26/2016 12:03	LBB	
Chloride	3.64	mg/L	0.0800	0.5000			4/26/2016 19:05	LBB	
Fluoride	0.0180J	mg/L	0.0100	0.3000			4/26/2016 12:03	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940003	Date Received:	4/21/2016 10:30
Sample ID:	DUP-1	Date Collected:	4/20/2016 00:00
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940004	Date Received:	4/21/2016 10:30
Sample ID:	GWC-5	Date Collected:	4/20/2016 12:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 19:22	MRP	
Calcium	4.39	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 19:22	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:01	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Barium	0.0553	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:44	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 19:44	LBB	
Sulfate	0.3670J	mg/L	0.3000	1.00			4/26/2016 12:41	LBB	
Chloride	3.69	mg/L	0.0800	0.5000			4/26/2016 19:44	LBB	
Fluoride	0.0320J	mg/L	0.0100	0.3000			4/26/2016 12:41	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940004	Date Received:	4/21/2016 10:30
Sample ID:	GWC-5	Date Collected:	4/20/2016 12:05
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940005	Date Received:	4/21/2016 10:30
Sample ID:	GWC-14	Date Collected:	4/20/2016 15:15
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 19:28	MRP	
Calcium	0.686	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 19:28	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:09	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:09	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Barium	0.0143	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:49	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/26/2016 20:22	LBB	
Sulfate	5.85	mg/L	0.3000	1.00			4/26/2016 13:20	LBB	
Chloride	4.55	mg/L	0.2000	1.25			4/26/2016 20:22	LBB	
Fluoride	0.0210J	mg/L	0.0100	0.3000			4/26/2016 13:20	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940006	Date Received:	4/21/2016 10:30
Sample ID:	FB-1	Date Collected:	4/20/2016 16:40
Sample Description	Field Blank	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 19:34	MRP	
Calcium	<0.500	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 19:34	MRP	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:25	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:54	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							4/26/2016 23:34	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			4/26/2016 23:34	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			4/26/2016 23:34	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			4/26/2016 23:34	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940006	Date Received:	4/21/2016 10:30
Sample ID:	FB-1	Date Collected:	4/20/2016 16:40
Sample Description	Field Blank	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID: 102940007 **Date Received:** 4/21/2016 10:30
Sample ID: FERB-1 **Date Collected:** 4/20/2016 16:50
Sample Description: Field Equipment Rinse Blank **Matrix:** Water
Location: McIntosh #4

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					4/22/2016 10:00	KLW	4/22/2016 20:04	MRP	
Calcium	<0.500	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:04	MRP	

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

TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:28	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:28	WCM	

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

Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 16:59	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							4/27/2016 01:30	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			4/27/2016 01:30	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			4/27/2016 01:30	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			4/27/2016 01:30	LBB	

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

WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940008	Date Received:	4/21/2016 10:30
Sample ID:	GWC-16	Date Collected:	4/20/2016 11:30
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 20:10	MRP	
Calcium	0.472J	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:10	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:31	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:31	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Barium	0.0259	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:22	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/27/2016 18:05	LBB	
Sulfate	0.5300J	mg/L	0.3000	1.00			4/27/2016 02:08	LBB	
Chloride	3.92	mg/L	0.0800	0.5000			4/27/2016 18:05	LBB	
Fluoride	0.0220J	mg/L	0.0100	0.3000			4/27/2016 02:08	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940009	Date Received:	4/21/2016 10:30
Sample ID:	GWC-1	Date Collected:	4/20/2016 14:20
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 20:16	MRP	
Calcium	3.22	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:16	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:33	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:33	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Barium	0.0554	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:27	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							4/27/2016 18:44	LBB	
Sulfate	1.79	mg/L	0.3000	1.00			4/27/2016 02:46	LBB	
Chloride	6.68	mg/L	0.2000	1.25			4/27/2016 18:44	LBB	
Fluoride	0.0400J	mg/L	0.0100	0.3000			4/27/2016 02:46	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID: 102940010 **Date Received:** 4/21/2016 10:30
Sample ID: DUP-2 **Date Collected:** 4/20/2016 00:00
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 20:23	MRP	
Calcium	3.04	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:23	MRP	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:36	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Barium	0.0505	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:32	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/27/2016 19:22	LBB	
Sulfate	1.52	mg/L	0.3000	1.00			4/27/2016 03:25	LBB	
Chloride	6.57	mg/L	0.2000	1.25			4/27/2016 19:22	LBB	
Fluoride	0.0380J	mg/L	0.0100	0.3000			4/27/2016 03:25	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID:	102940010	Date Received:	4/21/2016 10:30
Sample ID:	DUP-2	Date Collected:	4/20/2016 00:00
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	48	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID: 102940011 **Date Received:** 4/21/2016 10:30
Sample ID: GWC-17 **Date Collected:** 4/20/2016 11:09
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

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					4/22/2016 10:00	KLW	4/22/2016 20:29	MRP	
Calcium	2.48	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:29	MRP	

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

TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:44	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:44	WCM	

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

Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Cadmium	0.000633J	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Barium	0.0188	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:36	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							4/27/2016 20:01	LBB	
Sulfate	2.93	mg/L	0.3000	1.00			4/27/2016 04:03	LBB	
Chloride	4.25	mg/L	0.0800	0.5000			4/27/2016 20:01	LBB	
Fluoride	0.1470J	mg/L	0.0100	0.3000			4/27/2016 04:03	LBB	

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

WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	29	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID: 102940012 **Date Received:** 4/21/2016 10:30
Sample ID: GWC-12 **Date Collected:** 4/20/2016 13:24
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 20:35	MRP	
Calcium	0.690	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:35	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:49	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:49	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Barium	0.0114	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:41	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							4/27/2016 20:39	LBB	
Sulfate	0.6010J	mg/L	0.3000	1.00			4/27/2016 04:42	LBB	
Chloride	3.61	mg/L	0.0800	0.5000			4/27/2016 20:39	LBB	
Fluoride	0.0260J	mg/L	0.0100	0.3000			4/27/2016 04:42	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	41	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102940 CCR - McIntosh #4

Lab ID: 102940013 **Date Received:** 4/21/2016 10:30
Sample ID: GWC-11 **Date Collected:** 4/20/2016 15:40
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/22/2016 10:00	KLW	4/22/2016 20:41	MRP	
Calcium	8.94	mg/L	0.100	0.500	4/22/2016 10:00	KLW	4/22/2016 20:41	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/22/2016 06:43	WCM	4/22/2016 13:52	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/22/2016 06:43	WCM	4/22/2016 13:52	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Chromium	0.00856J	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Arsenic	0.00117J	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Barium	0.0113	mg/L	0.00200	0.0100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/22/2016 10:00	KLW	5/21/2016 17:46	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							4/27/2016 21:17	LBB	
Sulfate	4.37	mg/L	0.3000	1.00			4/27/2016 05:20	LBB	
Chloride	4.90	mg/L	0.0800	0.5000			4/27/2016 21:17	LBB	
Fluoride	0.3830	mg/L	0.0100	0.3000			4/27/2016 05:20	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	32	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 102940 CCR - McIntosh #4

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: 102940 CCR - McIntosh #4

QC Batch:	DIGM/4271		Analysis Method:	EPA 6020B		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	102935001	102935002	102935003	102935004	102935005	102940001
	102940002	102940003	102940004	102940005	102940006	102940007
	102940008	102940009	102940010	102940011	102940012	102940013

METHOD BLANK: 105213

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: 105214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Lithium	mg/L	0.2	0.217	109	80-120	
Beryllium	mg/L	0.1	0.104	104	80-120	
Boron	mg/L	0.1	0.112	112	80-120	
Chromium	mg/L	0.1	0.107	107	80-120	
Cobalt	mg/L	0.1	0.108	108	80-120	
Arsenic	mg/L	0.1	0.104	104	80-120	
Selenium	mg/L	0.1	0.103	103	80-120	
Molybdenum	mg/L	0.1	0.104	104	80-120	
Cadmium	mg/L	0.1	0.105	105	80-120	
Antimony	mg/L	0.1	0.106	106	80-120	
Barium	mg/L	0.1	0.103	103	80-120	
Thallium	mg/L	0.1	0.0976	97.6	80-120	
Lead	mg/L	0.1	0.105	105	80-120	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105215 105216 Original: 102935001

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	0.00209	0.2	0.213	0.217	105	107	75-125	1.9	20	
Beryllium	mg/L	8.8e-005	0.1	0.102	0.104	102	104	75-125	1.9	20	
Boron	mg/L	0.016	0.1	0.121	0.123	105	107	75-125	1.9	20	
Chromium	mg/L	0.00121	0.1	0.110	0.109	109	107	75-125	1.9	20	
Cobalt	mg/L	0.00049	0.1	0.110	0.108	109	108	75-125	0.92	20	
Arsenic	mg/L	6.5e-005	0.1	0.106	0.105	106	105	75-125	0.95	20	
Selenium	mg/L	0.00087	0.1	0.104	0.105	104	104	75-125	0	20	
Molybdenum	mg/L	2.5e-005	0.1	0.105	0.105	105	105	75-125	0	20	
Cadmium	mg/L	2.7e-005	0.1	0.107	0.105	107	105	75-125	1.9	20	
Antimony	mg/L	0.00018	0.1	0.108	0.106	108	106	75-125	1.9	20	
Barium	mg/L	0.0217	0.1	0.128	0.126	106	104	75-125	1.9	20	
Thallium	mg/L	3.3e-005	0.1	0.0979	0.0967	97.9	96.6	75-125	1.3	20	
Lead	mg/L	8.9e-005	0.1	0.106	0.105	106	105	75-125	0.95	20	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

QC Batch:	DIGM/4273		Analysis Method:	EPA 6010D		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	102935001	102935002	102935003	102935004	102935005	102940001
	102940002	102940003	102940004	102940005	102940006	102940007
	102940008	102940009	102940010	102940011	102940012	102940013

METHOD BLANK: 105221

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

LABORATORY CONTROL SAMPLE: 105222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
INORGANICS					
Calcium	mg/L	5	5.11	102	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105223 105224 Original: 102935003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	0.431	5	5.55	5.54	102	102	75-125	0	20	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

QC Batch:	HGPR/1648	Analysis Method:		EPA 7470A		
QC Batch Method:	EPA 7470A					
Associated Lab Samples:	102935001	102935002	102935003	102935004	102935005	102940001
	102940002	102940003	102940004	102940005	102940006	102940007
	102940008	102940009	102940010	102940011	102940012	102940013

METHOD BLANK: 105248

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

METHOD BLANK: 105254

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

LABORATORY CONTROL SAMPLE: 105249

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

LABORATORY CONTROL SAMPLE: 105250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0127	104	80-120	

LABORATORY CONTROL SAMPLE: 105255

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00203	102	80-120	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105251 105252 Original: 102940004

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	4.5e-006	0.002	0.00204	0.00203	102	101	80-120	0.99	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105256 105257 Original: 102940010

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	4e-006	0.002	0.00207	0.00206	103	103	80-120	0	20	

SAMPLE DUPLICATE: 105253 Original: 102940005

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

SAMPLE DUPLICATE: 105258 Original: 102940011

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: 102940 CCR - McIntosh #4

QC Batch:	IC/3017	Analysis Method:	EPA 300			
QC Batch Method:	EPA 300					
Associated Lab Samples:	102935001	102935002	102935003	102935004	102935005	102940001
	102940002	102940003	102940004	102940005	102940006	102940007
	102940008	102940009	102940010	102940011	102940012	102940013

METHOD BLANK: 105291

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

METHOD BLANK: 105302

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

METHOD BLANK: 105617

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: 105292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4980	99.6	90-110	
Sulfate	mg/L	5	4.94	98.7	90-110	
Fluoride	mg/L	0.5	0.5180	104	90-110	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

LABORATORY CONTROL SAMPLE: 105303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4950	99	90-110	
Sulfate	mg/L	5	4.95	99	90-110	
Fluoride	mg/L	0.5	0.5170	103	90-110	

LABORATORY CONTROL SAMPLE: 105618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4920	98.4	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105295 105296 Original: 102940002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	3.49	5	8.45	8.43	99.3	98.8	90-110	0.5	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105299 105300 Original: 102935001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	1.03	10	10.8	10.9	97.3	98.3	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105304 105305 Original: 102940006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0.009	1	1.02	1.02	101	101	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105306 105307 Original: 102940006

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	1.04	1.03	104	103	90-110	0.97	10	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105308 105309 Original: 102940006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0	10	10.1	10.0	101	100	90-110	1	10	

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QUALITY CONTROL DATA

Workorder: 102940 CCR - McIntosh #4

QC Batch:	GRAV/2850	Analysis Method:		SM 2540C		
QC Batch Method:	SM 2540C					
Associated Lab Samples:	102935005	102940001	102940002	102940003	102940004	102940005
	102940006	102940007	102940008	102940009	102940010	102940011
	102940012	102940013				

METHOD BLANK: 105316

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

LABORATORY CONTROL SAMPLE: 105318

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	234	97.1	90-110	

SAMPLE DUPLICATE: 105317 Original: 102935005

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	106	111	4.6	20	

SAMPLE DUPLICATE: 105336 Original: 102968005

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	49	46	6.3	20	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 102940 CCR - McIntosh #4

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
102940001	GWC-4	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940002	GWC-13	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940003	DUP-1	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940004	GWC-5	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940005	GWC-14	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940006	FB-1	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940007	FERB-1	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940008	GWC-16	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940009	GWC-1	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940010	DUP-2	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940011	GWC-17	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940012	GWC-12	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940013	GWC-11	EPA 3005A	DIGM/4271	EPA 6020B	ICPM/1062
102940001	GWC-4	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940002	GWC-13	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940003	DUP-1	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940004	GWC-5	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940005	GWC-14	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940006	FB-1	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940007	FERB-1	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940008	GWC-16	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940009	GWC-1	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940010	DUP-2	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940011	GWC-17	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940012	GWC-12	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940013	GWC-11	EPA 3005A	DIGM/4273	EPA 6010D	ICP/4986
102940001	GWC-4	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940002	GWC-13	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940003	DUP-1	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940004	GWC-5	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940005	GWC-14	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940006	FB-1	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833

Report ID: 102940 - 5032058
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 102940 CCR - McIntosh #4

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
102940007	FERB-1	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940008	GWC-16	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940009	GWC-1	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940010	DUP-2	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940011	GWC-17	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940012	GWC-12	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940013	GWC-11	EPA 7470A	HGPR/1648	EPA 7470A	CVAA/1833
102940001	GWC-4	EPA 300	IC/3017		
102940002	GWC-13	EPA 300	IC/3017		
102940003	DUP-1	EPA 300	IC/3017		
102940004	GWC-5	EPA 300	IC/3017		
102940005	GWC-14	EPA 300	IC/3017		
102940006	FB-1	EPA 300	IC/3017		
102940007	FERB-1	EPA 300	IC/3017		
102940008	GWC-16	EPA 300	IC/3017		
102940009	GWC-1	EPA 300	IC/3017		
102940010	DUP-2	EPA 300	IC/3017		
102940011	GWC-17	EPA 300	IC/3017		
102940012	GWC-12	EPA 300	IC/3017		
102940013	GWC-11	EPA 300	IC/3017		
102940001	GWC-4	SM 2540C	GRAV/2850		
102940002	GWC-13	SM 2540C	GRAV/2850		
102940003	DUP-1	SM 2540C	GRAV/2850		
102940004	GWC-5	SM 2540C	GRAV/2850		
102940005	GWC-14	SM 2540C	GRAV/2850		
102940006	FB-1	SM 2540C	GRAV/2850		
102940007	FERB-1	SM 2540C	GRAV/2850		
102940008	GWC-16	SM 2540C	GRAV/2850		
102940009	GWC-1	SM 2540C	GRAV/2850		
102940010	DUP-2	SM 2540C	GRAV/2850		
102940011	GWC-17	SM 2540C	GRAV/2850		
102940012	GWC-12	SM 2540C	GRAV/2850		

Report ID: 102940 - 5032058
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 102940 CCR - McIntosh #4

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
102940013	GWC-11	SM 2540C	GRAV/2850		

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LABORATORY CERTIFICATIONS

Workorder: 102940 CCR - McIntosh #4

Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Costed +
 Seal ID: 20160420-01

Company: Southern Company Services
 Report To: Jojo Abraham
 Address: 241 Ralph McGill Blvd SE Bldg 185
Atlanta, GA 30308
 Phone/Fax: 404-506-7239
 Contact: Jojo Abraham
 Project Location: Plant McIntosh

Sample Shipment Date: 8/4/20/16
 Sampled By: Myles Rogers
Myles Rogers
 Signature
 Sample Received Date: 10/4-21-16 @ 1030
 Sample Received By: [Signature]

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

Account Number: 6
 Special Instructions: 7 McIntosh 4 CER GW

LAB USE ONLY

Work Order No. 102940
 Reviewed By: [Signature] 4-21-16

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

PRESERVATIVE 21		ANALYSIS REQUESTED 22	
HM03 Ice	HM03		
N	N		

18 Sample Type	19 Matrix	20 No. of Containers
G	GW	3
G	GW	3
G	GW	3

17 Sample Description	18 Sample Type	19 Matrix	20 No. of Containers
Landfill 4	G	GW	3
Landfill 4	G	GW	3
Landfill 4	G	GW	3

LAB USE ONLY 14 LAB ID	15 Sample Number	16 Collection Date	16 Collection Time	17 Sample Description	18 Sample Type	19 Matrix	20 No. of Containers
<u>102940001</u>	<u>6WL-4</u>	<u>4/20/16</u>	<u>1047</u>	<u>Landfill 4</u>	<u>G</u>	<u>GW</u>	<u>3</u>
<u>2</u>	<u>6WL-13</u>	<u>4/20/16</u>	<u>1338</u>	<u>Landfill 4</u>	<u>G</u>	<u>GW</u>	<u>3</u>
<u>3</u>	<u>DUP-1</u>	<u>4/20/16</u>	<u>---</u>	<u>Landfill 4</u>	<u>G</u>	<u>GW</u>	<u>3</u>

FOR CHAIN OF CUSTODY USE ONLY 27

Relinquished by: 28 Myles Rogers Date/Time 4/20/16 1710
 3.8°C (GPEL-IR-3P) ice, seal intact, cooler in good condition, pH 2
 Received by: 29 [Signature] Date/Time 4-21-16 @ 1030
 Relinquished by: _____ Date/Time _____
 Received by: 30 [Signature] Date/Time Aug 4/21/16
 FedEx # 8093 9866 4232

Sample Type Key: 23	Matrix Key: 24	Preservative Key: 25	LAB USE ONLY 26 Comments
G-Grab O-Other C-Composite	SW-Surface Water GW-Ground Water S-Solid SL-Sludge WM-Waste Water DW-Drinking Water LO-Liquid	H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved O-Other (Specify)	

Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Seal ID: 20160420-04

Company: Southern Company Services

Sample Shipment Date: 4/20/16

Report To: Jojo Abraham
 Address: 241 Ralph McGill Blvd SE B1815
Atlanta, GA 30308

Sampled By: Stephanie Gurr
 Print Name
Stephanie Gurr
 Signature

Phone/Fax: 404-506-7239
 Contact: Jojo Abraham

Sample Received Date: 4-21-16 @ 1030
 Sample Received By: [Signature]

Project Location: Plant McIntosh LFP #4

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

Account Number: 6
 Special Instructions: McIntosh #4 CCR6w

LAB USE ONLY

Work Order No. 102940
 Reviewed By: [Signature] 4-21-16

12 Page 1 of 1

13 Standard Turnaround Time
 # of Business Days (Rush)
 (Must be cleared through Env. Lab. prior to shipment)

PRESERVATIVE 21		ANALYSIS REQUESTED 22	
HV03	ICE HV03		
N	T		

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16 Date	Time	Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20
<u>102940004</u>	<u>GWC-5</u>	<u>4/20/16</u>	<u>1205</u>	<u>Landfill #4</u>	<u>G</u>	<u>GW</u>	<u>3</u>
<u>5</u>	<u>GWC-14</u>	<u>4/20/16</u>	<u>1515</u>	<u>Landfill #4</u>	<u>G</u>	<u>GW</u>	<u>3</u>
<u>6</u>	<u>FB-1</u>	<u>4/20/16</u>	<u>1640</u>	<u>Field Blank</u>	<u>G</u>	<u>ON</u>	<u>3</u>
<u>7</u>	<u>FEBB-1</u>	<u>4/20/16</u>	<u>1650</u>	<u>Field Equipment Rinse Blank</u>	<u>G</u>	<u>ON</u>	<u>3</u>

LAB USE ONLY 23	LAB USE ONLY 24	LAB USE ONLY 25	LAB USE ONLY 26
G-Grab O-Other	SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water LQ-Liquid	H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved O-Other (Specify)	Comments

FOR CHAIN OF CUSTODY USE ONLY 27

Relinquished by: Stephanie Gurr Date/Time 4/20/16 1717
 Relinquished by: [Signature] Date/Time 4-21-16 @1030
 Received by: [Signature] Date/Time 4/21/16
 Relinquished by: [Signature] Date/Time 4/21/16 @1030
 Received by: [Signature] Date/Time 4/21/16

LAB USE ONLY: Sample Receipt Information 30
3.8°C (GEL-IR-3P) ice, seal intact, cooler in good condition, p#2
FelEx # 8093 9866 4232

Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Custody
 Serl ID: 20160420-0Z

Company: Southern Company Services

Sample Shipment Date: 8/4/20/16

Report To: Jojo Abraham

Sampled By: Amenda Skerner
Print Name

Address: 241 Ralph McG. II Blvd B0185 Atlanta, GA 30308

Signature
 Sample Received Date: 10/4/21-16 @1030

Contact: Jojo Abraham

Sample Received By: [Signature]

Project Location: 5 Plnt McIntosh CF #4

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

Account Number: 6

Special Instructions: 7 McIntosh #4 CCR GW

LAB USE ONLY

Work Order No. 102940

Reviewed By: [Signature] 4-21-16

12 Page 1 of 1

13 Standard Turnaround Time

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

PRESERVATIVE 21		Sample Type Key: 23
HMGS Ice	N	G-Grab O-Other
HMGS Ice	N	Matrix Key: 24 SW-Surface Water GW-Ground Water SL-Solid W-Wipe LD-Liquid
ANALYSIS REQUESTED 22		Preservative Key: 25
EPA 6020 + 2470	X	H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved O-Other (Specify)
Cl, F, SO4 EPA 300	X	
TDS 5M2540L	X	
Red: um 226 + 229	X	
6a Tech		

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16 Date / Time	Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20
<u>102940008</u>	<u>6WL-16</u>	<u>4/20/16 1130</u>	<u>Leandfill #4</u>	<u>G GW</u>	<u>S</u>	
<u>9</u>	<u>6WL-1</u>	<u>4/20/16 1420</u>	<u>Leandfill #4</u>	<u>G GW</u>	<u>S</u>	
<u>10</u>	<u>DUP-2</u>	<u>4/20/16 -</u>	<u>Leandfill #4</u>	<u>G GW</u>	<u>S</u>	

LAB USE ONLY: Sample Receipt Information 30

Relinquished by: [Signature] 8/4/20/16 1115
 Date/Time

Received by: [Signature] 4-21-16 @1030
 Date/Time

Relinquished by: [Signature] 8/4/20/16
 Date/Time

Received by: [Signature] 8/4/20/16
 Date/Time

3.80C (60FL-IR-3P) ice, seal intact, cooler in good condition
 pH=2
 FedEx # 8093 9866 4232

Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Custodial

Serial ID: 20160420-03

Company: 1 Southern Company Services

Report To: Jojo Abraham
 Address: 241 Ralph McGill Blvd SE Bldg 5E
Atlanta, GA 30308

Phone/Fax: 3 404-506-7239

Contact: Jojo Abraham

Project Location: 5 Plant McIntosh CFX4

Account Number: 6

Special Instructions: 7 McIntosh #4 CCR GW

Sample Shipment Date: 8 4/20/16

Sampled By: Tracy Wardell
Print Name

[Signature]
Signature

Sample Received Date: 10 4-21-16 @ 1630

Sample Received By: 11 [Signature]

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

LAB USE ONLY

Work Order No. 102940
 Reviewed By: [Signature]

12 Page 1 of 1

13 Standard Turnaround Time

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

PRESERVATIVE 21		Sample Type Key: 23
HW3 Ice HW3		G-Grab O-Other C-Composite
J		Matrix Key: 24
N		SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water LQ-Liquid OW-Other Water
ANALYSIS REQUESTED 22		Preservative Key: 25
EPA 6020 + 3470		H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved O-Other (Specify)
Cl, F, SO4 EPA 300		
TDS SM 2540C		
Ca Tech		

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16 Date	Time	Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20
102940011	GW-17	4/20/16	1109	Landfill #4	G	GW	3
12	GW-12	4/20/16	1324	Landfill #4	G	GW	3
13	GW-11	4/20/16	1540	Landfill #4	G	GW	3

LAB USE ONLY 26 Comments
3.8°C (GDEL-TA-3P) ice, seal tight, cooler in good condition, pH 2
FedEx # 8093 9866 423d

FOR CHAIN OF CUSTODY USE ONLY 27

Relinquished by: [Signature] Date/Time 4/20/16 1730

Received by: [Signature] Date/Time 4-21-16 @ 1630

Relinquished by: [Signature] Date/Time 4/21/16

Received by: [Signature] Date/Time 4/21/16

Sample Receipt Checklist



Client: McIntosh
 Workorder No.: 102940
 Carrier: FEDEX

of Samples: 13
 Tracking No: 809398664232

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	3.8
COC is present	True	Overwrite present on COC.
COC is filled out in ink and is legible	True	
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	Missing collection year on sample GWC -13. Sample DUP-2 was logged in based on the collection time provided 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:

May 27, 2016

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

RE: Workorder: 102968 CCR - McIntosh #4

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: 102968 - 5032131
GPC Report Page 1 of 22

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SAMPLE SUMMARY

Workorder: 102968 CCR - McIntosh #4

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
102968001	GWC-20	N/A	Water	4/21/2016 14:35	4/22/2016 10:25
102968002	GWC-21	N/A	Water	4/21/2016 12:27	4/22/2016 10:25
102968003	GWC-15	N/A	Water	4/21/2016 10:38	4/22/2016 10:25
102968004	GWC-22	N/A	Water	4/21/2016 14:45	4/22/2016 10:25
102968005	GWC-10	N/A	Water	4/21/2016 12:00	4/22/2016 10:25
102968006	FB-2	N/A	Water	4/21/2016 15:15	4/22/2016 10:25
102968007	FERB-2	N/A	Water	4/21/2016 15:20	4/22/2016 10:25

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID:	102968001	Date Received:	4/22/2016 10:25
Sample ID:	GWC-20	Date Collected:	4/21/2016 14:35
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/27/2016 12:20	KLW	4/28/2016 11:47	HAM	
Calcium	2.29	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 11:47	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:00	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:00	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Cobalt	0.00468J	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Cadmium	0.000520J	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Barium	0.0325	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:00	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/11/2016 03:53	LBB	
Sulfate	5.25	mg/L	0.3000	1.00			5/11/2016 03:53	LBB	
Chloride	11.6	mg/L	0.2000	1.25			5/11/2016 04:31	LBB	
Fluoride	0.0600J	mg/L	0.0100	0.3000			5/11/2016 03:53	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	28	mg/L	25	25			4/25/2016 22:50	KLW	

Report ID: 102968 - 5032131
 GPC Report Page 3 of 22

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID:	102968002	Date Received:	4/22/2016 10:25
Sample ID:	GWC-21	Date Collected:	4/21/2016 12:27
Sample Description	Landfill #4	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/27/2016 12:20	KLW	4/28/2016 11:53	HAM	
Calcium	2.78	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 11:53	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:03	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:03	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Barium	0.0165	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:05	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/11/2016 05:48	LBB	
Sulfate	1.99	mg/L	0.3000	1.00			5/11/2016 05:10	LBB	
Chloride	6.08	mg/L	0.2000	1.25			5/11/2016 05:48	LBB	
Fluoride	0.0220J	mg/L	0.0100	0.3000			5/11/2016 05:10	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID: 102968003 **Date Received:** 4/22/2016 10:25
Sample ID: GWC-15 **Date Collected:** 4/21/2016 10:38
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/27/2016 12:20	KLW	4/28/2016 11:59	HAM	
Calcium	0.686	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 11:59	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:06	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:06	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Barium	0.0262	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:38	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/11/2016 07:05	LBB	
Sulfate	0.5030J	mg/L	0.3000	1.00			5/11/2016 06:27	LBB	
Chloride	3.99	mg/L	0.2000	1.25			5/11/2016 07:05	LBB	
Fluoride	0.0190J	mg/L	0.0100	0.3000			5/11/2016 06:27	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID: 102968004 **Date Received:** 4/22/2016 10:25
Sample ID: GWC-22 **Date Collected:** 4/21/2016 14:45
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/27/2016 12:20	KLW	4/28/2016 12:41	HAM	
Calcium	27.3	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 12:41	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:14	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:14	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Cobalt	0.00494J	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Arsenic	0.00422J	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Molybdenum	0.00285J	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Barium	0.0996	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:42	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/11/2016 08:22	LBB	
Sulfate	11.2	mg/L	0.3000	1.00			5/11/2016 07:44	LBB	
Chloride	4.34	mg/L	0.0800	0.5000			5/11/2016 08:22	LBB	
Fluoride	0.3220	mg/L	0.0100	0.3000			5/11/2016 07:44	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	108	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID: 102968005 **Date Received:** 4/22/2016 10:25
Sample ID: GWC-10 **Date Collected:** 4/21/2016 12:00
Sample Description: Landfill #4 **Matrix:** Water
Location: McIntosh #4

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					4/27/2016 12:20	KLW	4/28/2016 12:47	HAM	
Calcium	13.9	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 12:47	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:30	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:30	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Chromium	0.00617J	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Barium	0.0178	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:47	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/11/2016 09:39	LBB	
Sulfate	1.93	mg/L	0.3000	1.00			5/11/2016 09:00	LBB	
Chloride	6.41	mg/L	0.2000	1.25			5/11/2016 09:39	LBB	
Fluoride	0.2170J	mg/L	0.0100	0.3000			5/11/2016 09:00	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	49	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID:	102968006	Date Received:	4/22/2016 10:25
Sample ID:	FB-2	Date Collected:	4/21/2016 15:15
Sample Description	Field Blank	Matrix:	Water
Location	McIntosh #4		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					4/27/2016 12:20	KLW	4/28/2016 12:53	HAM	
Calcium	<0.500	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 12:53	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:38	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:38	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:52	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/11/2016 10:17	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/11/2016 10:17	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/11/2016 10:17	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/11/2016 10:17	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							4/25/2016 22:50	KLW	
TDS	<25	mg/L	25	25			4/25/2016 22:50	KLW	

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ANALYTICAL RESULTS

Workorder: 102968 CCR - McIntosh #4

Lab ID: 102968007 **Date Received:** 4/22/2016 10:25
Sample ID: FERB-2 **Date Collected:** 4/21/2016 15:20
Sample Description: Field Equipment Rinse Blank **Matrix:** Water
Location: McIntosh #4

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					4/27/2016 12:20	KLW	4/28/2016 12:59	HAM	
Calcium	<0.500	mg/L	0.100	0.500	4/27/2016 12:20	KLW	4/28/2016 12:59	HAM	

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

TOTAL METALS					4/26/2016 06:28	WCM	4/26/2016 14:43	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	4/26/2016 06:28	WCM	4/26/2016 14:43	WCM	

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

Lithium	<0.0500	mg/L	0.0100	0.0500	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Boron	<0.100	mg/L	0.0200	0.100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	4/26/2016 10:25	KLW	5/21/2016 18:56	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/11/2016 12:12	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/11/2016 12:12	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/11/2016 12:12	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/11/2016 12:12	LBB	

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

WET CHEMISTRY							4/28/2016 12:15	KLW	
TDS	<25	mg/L	25	25			4/28/2016 12:15	KLW	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 102968 CCR - McIntosh #4

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: 102968 CCR - McIntosh #4

QC Batch:	GRAV/2850		Analysis Method:	SM 2540C		
QC Batch Method:	SM 2540C					
Associated Lab Samples:	102935005	102940001	102940002	102940003	102940004	102940005
	102940006	102940007	102940008	102940009	102940010	102940011
	102940012	102940013	102968001	102968002	102968003	102968004
	102968005	102968006				

METHOD BLANK: 105316

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

LABORATORY CONTROL SAMPLE: 105318

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	234	97.1	90-110	

SAMPLE DUPLICATE: 105317 Original: 102935005

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	106	111	4.6	20	

SAMPLE DUPLICATE: 105336 Original: 102968005

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	49	46	6.3	20	

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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

QC Batch: HGPR/1649 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A
 Associated Lab Samples: 102968001 102968002 102968003 102968004 102968005 102968006
 102968007

METHOD BLANK: 105337

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

METHOD BLANK: 105343

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

LABORATORY CONTROL SAMPLE: 105338

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00199	100	80-120	

LABORATORY CONTROL SAMPLE: 105339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0124	102	80-120	

LABORATORY CONTROL SAMPLE: 105344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00198	99	80-120	

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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105340 105341 Original: 102968003

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	0.00202	0.00197	101	98	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105345 105346 Original: 102968005

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	0.00201	0.00193	100	96	80-120	4.1	20	

SAMPLE DUPLICATE: 105342 Original: 102968004

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

SAMPLE DUPLICATE: 105347 Original: 102968006

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: 102968 CCR - McIntosh #4

QC Batch: DIGM/4278 Analysis Method: EPA 6010D
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 102968001 102968002 102968003 102968004 102968005 102968006
 102968007

METHOD BLANK: 105351

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

LABORATORY CONTROL SAMPLE: 105352

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
INORGANICS					
Calcium	mg/L	5	5.26	105	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105353 105354 Original: 102968003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	0.686	5	5.84	5.78	103	102	75-125	0.98	20	

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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

QC Batch: DIGM/4279 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 102968001 102968002 102968003 102968004 102968005 102968006
 102968007

METHOD BLANK: 105355

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: 105356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Lithium	mg/L	0.2	0.213	106	80-120
Beryllium	mg/L	0.1	0.101	101	80-120
Boron	mg/L	0.1	0.104	104	80-120
Chromium	mg/L	0.1	0.104	104	80-120
Cobalt	mg/L	0.1	0.105	105	80-120
Arsenic	mg/L	0.1	0.101	101	80-120
Selenium	mg/L	0.1	0.0962	96.2	80-120
Molybdenum	mg/L	0.1	0.100	100	80-120
Cadmium	mg/L	0.1	0.102	102	80-120
Antimony	mg/L	0.1	0.103	103	80-120
Barium	mg/L	0.1	0.100	100	80-120
Thallium	mg/L	0.1	0.0939	93.9	80-120
Lead	mg/L	0.1	0.102	102	80-120

Report ID: 102968 - 5032131
 GPC Report Page 15 of 22

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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105357 105358 Original: 102968002

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	0.00106	0.2	0.210	0.212	104	106	75-125	1.9	20	
Beryllium	mg/L	7.2e-005	0.1	0.100	0.101	100	101	75-125	1	20	
Boron	mg/L	0.0158	0.1	0.119	0.121	104	105	75-125	0.96	20	
Chromium	mg/L	0.00080	0.1	0.105	0.104	104	103	75-125	0.97	20	
Cobalt	mg/L	0.0018	0.1	0.106	0.105	104	104	75-125	0	20	
Arsenic	mg/L	0.00094	0.1	0.103	0.104	102	103	75-125	0.98	20	
Selenium	mg/L	0.00028	0.1	0.102	0.102	101	102	75-125	0.99	20	
Molybdenum	mg/L	4.2e-005	0.1	0.102	0.103	102	103	75-125	0.98	20	
Cadmium	mg/L	8.9e-005	0.1	0.102	0.102	101	102	75-125	0.99	20	
Antimony	mg/L	0.00019	0.1	0.105	0.105	105	104	75-125	0.96	20	
Barium	mg/L	0.0165	0.1	0.118	0.121	101	104	75-125	2.9	20	
Thallium	mg/L	3.5e-005	0.1	0.0936	0.0947	93.6	94.7	75-125	1.2	20	
Lead	mg/L	3.6e-005	0.1	0.102	0.103	102	103	75-125	0.98	20	

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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

QC Batch: GRAV/2854 Analysis Method: SM 2540C
 QC Batch Method: SM 2540C
 Associated Lab Samples: 102968007

METHOD BLANK: 105449

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

LABORATORY CONTROL SAMPLE: 105451

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

SAMPLE DUPLICATE: 105450 Original: 102968007

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

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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

QC Batch: IC/3024 Analysis Method: EPA 300
 QC Batch Method: EPA 300
 Associated Lab Samples: 102968001 102968002 102968003 102968004 102968005 102968006
 102968007

METHOD BLANK: 105589

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

METHOD BLANK: 105599

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: 105590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	0.5	0.5270	105	90-110
Sulfate	mg/L	5	5.15	103	90-110
Fluoride	mg/L	0.5	0.5350	107	90-110

LABORATORY CONTROL SAMPLE: 105592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	11.3	11.8	104	90-110
Fluoride	mg/L	6.83	6.89	101	90-110

LABORATORY CONTROL SAMPLE: 105600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	0.5	0.5300	106	90-110
Sulfate	mg/L	5	5.16	103	90-110
Fluoride	mg/L	0.5	0.5380	108	90-110

Report ID: 102968 - 5032131
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QUALITY CONTROL DATA

Workorder: 102968 CCR - McIntosh #4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105593 105594 Original: 102968006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0.011	1	1.01	1.02	100	100	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105595 105596 Original: 102968006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.002	1	1.04	1.04	104	103	90-110	0.97	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105597 105598 Original: 102968006

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0	10	10.1	10.3	101	103	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105602 105603 Original: 103149004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0.02	1	1.05	1.05	103	103	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 102968 CCR - McIntosh #4

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
102968001	GWC-20	SM 2540C	GRAV/2850		
102968002	GWC-21	SM 2540C	GRAV/2850		
102968003	GWC-15	SM 2540C	GRAV/2850		
102968004	GWC-22	SM 2540C	GRAV/2850		
102968005	GWC-10	SM 2540C	GRAV/2850		
102968006	FB-2	SM 2540C	GRAV/2850		
102968001	GWC-20	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968002	GWC-21	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968003	GWC-15	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968004	GWC-22	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968005	GWC-10	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968006	FB-2	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968007	FERB-2	EPA 7470A	HGPR/1649	EPA 7470A	CVAA/1834
102968001	GWC-20	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968002	GWC-21	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968003	GWC-15	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968004	GWC-22	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968005	GWC-10	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968006	FB-2	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968007	FERB-2	EPA 3005A	DIGM/4278	EPA 6010D	ICP/4989
102968001	GWC-20	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968002	GWC-21	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968003	GWC-15	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968004	GWC-22	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968005	GWC-10	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968006	FB-2	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968007	FERB-2	EPA 3005A	DIGM/4279	EPA 6020B	ICPM/1063
102968007	FERB-2	SM 2540C	GRAV/2854		

Report ID: 102968 - 5032131
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 102968 CCR - McIntosh #4

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
102968001	GWC-20	EPA 300	IC/3024		
102968002	GWC-21	EPA 300	IC/3024		
102968003	GWC-15	EPA 300	IC/3024		
102968004	GWC-22	EPA 300	IC/3024		
102968005	GWC-10	EPA 300	IC/3024		
102968006	FB-2	EPA 300	IC/3024		
102968007	FERB-2	EPA 300	IC/3024		

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LABORATORY CERTIFICATIONS

Workorder: 102968 CCR - McIntosh #4

Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

**ANALYSIS REQUEST AND
 CHAIN OF CUSTODY RECORD**

Seal ID: 20100421-02

**LAB
 USE
 ONLY**

Work Order No. 102968

Reviewed By: AMJ 4/22/16

12 Page of

13 Standard Turnaround Time

Company: 1 Southern Company Services Sample Shipment Date: 8 4/21/16
 Report To: Joju Abraham
 Address: 2 241 Ralph McGill Blvd SE B1086 Sampled By: 9 Tracy Maxwell (TJW), Myles Rogers (MR)
Atlanta, GA 30308 My-Bj

Signature: My-Bj

Phone/Fax: 3 404-506-7239 Sample Received Date: 10

Contact: 4 Joju Abraham Sample Received By: 11

Project Location: 5 Plant McIntosh LF #4
 Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

Account Number: 6

Special Instructions: 7 McIntosh #4 CCR GW

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16		Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20	ANALYSIS REQUESTED 22			LAB USE ONLY 26 Comments
		Date	Time					ICF	HN03	HN03	
102968001	GNC-20	4/21/16	1435	Landfill #4	G	GN	3	X	X	X	TW
2	GNC-21	4/21/16	1227	Landfill #4	G	GN	3	X	X	X	TW
3	GNC-15	4/21/16	1038	Landfill #4	G	GN	3	X	X	X	MR
4	GNC-22	4/21/16	1445	Landfill #4	G	GN	3	X	X	X	MR
FOR CHAIN OF CUSTODY USE ONLY 27											
Relinquished by: 28 <u>Stephanie Skew</u>				Date/Time	3.7°C (GPR-IR-3P) i.e. seal intact, cooler in good condition, pH < 2						
Received by: 29 <u>[Signature]</u>				Date/Time	FedEx # 8093 9866 4254						
Relinquished by:				Date/Time							
Received by:				Date/Time							

Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

**ANALYSIS REQUEST AND
 CHAIN OF CUSTODY RECORD**

Seal ID: 20160421-01

**LAB
 USE
 ONLY**

Work Order No. 102968

Reviewed By: ANJ 4/22/16

12 Page of

Company: 1 Southern Company Services

Report To: Joju Abraham

Address: 2 241 Ralph McGill Blvd SE 81018
 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 #4 CCR GW

Sample Shipment Date: 8

Sampled By: 9 Amanda Stormer
Print Name

ANJU
Signature

Sample Received Date: 10

Sample Received By: 11

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

13 Standard Turnaround Time

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

LAB USE ONLY LAB ID	Sample Number 15	Collection 16		Sample Description 17	Sample Type 18	Matrix 19	No. of Containers 20	ANALYSIS REQUESTED 22			PRESERVATIVE 21		Sample Type Key: 23 G-Grab O-Other C-Composite	Matrix Key: 24 SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water LO-Liquid OW-Other Water	Preservative Key: 25 H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved O-Other (Specify)	LAB USE ONLY 26 Comments	
		Date	Time					ICF	HNO3	HNO3	HNO3						
<u>102968005</u>	<u>GWC-10</u>	<u>4/21/16</u>	<u>1200</u>	<u>Landfill #4</u>	<u>G</u>	<u>GW</u>	<u>3</u>	<u>ICF</u>	<u>TDS SM 2540C</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>AS</u>	
<u>6</u>	<u>FB-2</u>	<u>4/21/16</u>	<u>1515</u>	<u>Field Blank</u>	<u>Ø</u>	<u>OW</u>	<u>3</u>		<u>Ra 226/1228</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>AS</u>	
<u>7</u>	<u>FERB-2</u>	<u>4/21/16</u>	<u>1520</u>	<u>Field Equipment Rinse Blank</u>	<u>Ø</u>	<u>OW</u>	<u>3</u>		<u>GA Tech</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>AS</u>	
									<u>Metals App. 8+4</u>	<u>X</u>	<u>X</u>	<u>X</u>					
									<u>6020/7470</u>	<u>X</u>	<u>X</u>	<u>X</u>					
FOR CHAIN OF CUSTODY USE ONLY 27																	
				Date/Time													
				<u>0-1/21/16</u>													
				Date/Time													
				<u>4-22-16 @ 10:05</u>													
				Date/Time													
				<u>370C (GPEL-IR-3P) ice seal intact, cooler in good condition pH2</u>													
				<u>FIDEx # 8093 9866 4254, 454-12-16</u>													
				<u>overwrite on Sample ID</u>													
Relinquished by: <u>28 ANJU</u> Received by: <u>29</u> Relinquished by: <u>25</u> Received by: <u> </u>																	

Sample Receipt Checklist



Client: McIntosh
 Workorder No.: 102968
 Carrier: FEDEX

of Samples: 7
 Tracking No: 809398664254

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	3.7
COC is present	True	
COC is filled out in ink and is legible	True	Over-write present on sample ID field.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:



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: AZF0648

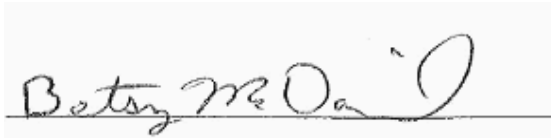
July 01, 2016

Project: CCR Event

Project #: Plant McIntosh LF #4

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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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

July 01, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWA-14	AZF0648-01	Ground Water	06/14/16 13:08	06/16/16 14:25
GWA-2	AZF0648-02	Ground Water	06/14/16 10:45	06/16/16 14:25
GWA-3	AZF0648-03	Ground Water	06/14/16 12:48	06/16/16 14:25
GWA-13	AZF0648-04	Ground Water	06/14/16 11:14	06/16/16 14:25
GWA-4	AZF0648-05	Ground Water	06/14/16 11:20	06/16/16 14:25
GWA-5	AZF0648-06	Ground Water	06/14/16 13:40	06/16/16 14:25
GWA-16	AZF0648-07	Ground Water	06/15/16 10:20	06/16/16 14:25
GWC-17	AZF0648-08	Ground Water	06/15/16 13:00	06/16/16 14:25
FB-1	AZF0648-09	DI Water	06/15/16 14:30	06/16/16 14:25
FERB-1	AZF0648-10	DI Water	06/15/16 14:40	06/16/16 14:25
GWA-15	AZF0648-11	Ground Water	06/15/16 09:43	06/16/16 14:25
Dup-1	AZF0648-12	Ground Water	06/15/16 00:00	06/16/16 14:25
GWC-9	AZF0648-13	Ground Water	06/15/16 11:56	06/16/16 14:25
GWC-1	AZF0648-14	Ground Water	06/15/16 10:03	06/16/16 14:25
GWC-12	AZF0648-15	Ground Water	06/15/16 11:23	06/16/16 14:25
GWC-11	AZF0648-16	Ground Water	06/15/16 14:05	06/16/16 14:25



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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 2016

Case Narrative

Plant McIntosh LF #4 report AZF0648 - 7/1/2016

Work order revised for client request to adjust QC source data in batch 6060444 to correspond with the same analytical run as sample data AZF0648-04.



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-14

Lab Number ID: AZF0648-01

Date/Time Sampled: 6/14/2016 1:08:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	65	25	10	mg/L	SM 2540 C		1	06/20/16 19:50	06/20/16 19:50	6060473	JPT
Inorganic Anions											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 11:43	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 11:43	6060444	RLC
Sulfate	4.6	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 11:43	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-2

Lab Number ID: AZF0648-02

Date/Time Sampled: 6/14/2016 10:45:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	55	25	10	mg/L	SM 2540 C		1	06/20/16 19:50	06/20/16 19:50	6060473	JPT
Inorganic Anions											
Chloride	5.0	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/22/16 06:59	6060444	RLC
Fluoride	0.02	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/22/16 06:59	6060444	RLC
Sulfate	1.7	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/22/16 06:59	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-3

Lab Number ID: AZF0648-03

Date/Time Sampled: 6/14/2016 12:48:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	46	25	10	mg/L	SM 2540 C		1	06/20/16 19:50	06/20/16 19:50	6060473	JPT
Inorganic Anions											
Chloride	8.3	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 12:26	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 12:26	6060444	RLC
Sulfate	0.88	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 12:26	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-13

Lab Number ID: AZF0648-04

Date/Time Sampled: 6/14/2016 11:14:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	47	25	10	mg/L	SM 2540 C		1	06/20/16 19:50	06/20/16 19:50	6060473	JPT
Inorganic Anions											
Chloride	3.4	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/22/16 07:20	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/22/16 07:20	6060444	RLC
Sulfate	0.62	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/22/16 07:20	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-4

Lab Number ID: AZF0648-05

Date/Time Sampled: 6/14/2016 11:20:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	67	25	10	mg/L	SM 2540 C		1	06/20/16 19:50	06/20/16 19:50	6060473	JPT
Inorganic Anions											
Chloride	2.9	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 13:51	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 13:51	6060444	RLC
Sulfate	8.6	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 13:51	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-5

Lab Number ID: AZF0648-06

Date/Time Sampled: 6/14/2016 1:40:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	62	25	10	mg/L	SM 2540 C		1	06/20/16 19:50	06/20/16 19:50	6060473	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 14:12	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 14:12	6060444	RLC
Sulfate	0.48	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 14:12	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-16

Lab Number ID: AZF0648-07

Date/Time Sampled: 6/15/2016 10:20:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	67	25	10	mg/L	SM 2540 C		1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	3.8	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 14:33	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 14:33	6060444	RLC
Sulfate	0.67	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 14:33	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWC-17

Lab Number ID: AZF0648-08

Date/Time Sampled: 6/15/2016 1:00:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	85	25	10	mg/L	SM 2540 C		1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	4.1	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 14:54	6060444	RLC
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 14:54	6060444	RLC
Sulfate	1.8	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 14:54	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: FB-1

Lab Number ID: AZF0648-09

Date/Time Sampled: 6/15/2016 2:30:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	17	25	10	mg/L	SM 2540 C	J	1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 18:59	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 18:59	6060444	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 18:59	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: FERB-1

Lab Number ID: AZF0648-10

Date/Time Sampled: 6/15/2016 2:40:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	47	25	10	mg/L	SM 2540 C		1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 19:20	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 19:20	6060444	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 19:20	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWA-15

Lab Number ID: AZF0648-11

Date/Time Sampled: 6/15/2016 9:43:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	58	25	10	mg/L	SM 2540 C		1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	3.5	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 19:40	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 19:40	6060444	RLC
Sulfate	0.62	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 19:40	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: Dup-1

Lab Number ID: AZF0648-12

Date/Time Sampled: 6/15/2016 12:00:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	34	25	10	mg/L	SM 2540 C		1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	3.6	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:01	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:01	6060444	RLC
Sulfate	0.64	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 20:01	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWC-9

Lab Number ID: AZF0648-13

Date/Time Sampled: 6/15/2016 11:56:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	84	25	10	mg/L	SM 2540 C		1	06/20/16 20:25	06/20/16 20:25	6060474	JPT
Inorganic Anions											
Chloride	12	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:22	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:22	6060444	RLC
Sulfate	3.8	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:22	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWC-1

Lab Number ID: AZF0648-14

Date/Time Sampled: 6/15/2016 10:03:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	52	25	10	mg/L	SM 2540 C		1	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:42	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:42	6060444	RLC
Sulfate	2.0	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 20:42	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWC-12

Lab Number ID: AZF0648-15

Date/Time Sampled: 6/15/2016 11:23:00AM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	27	25	10	mg/L	SM 2540 C		1	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	3.3	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 21:03	6060444	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 21:03	6060444	RLC
Sulfate	0.80	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 21:03	6060444	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Project: CCR Event

Client ID: GWC-11

Lab Number ID: AZF0648-16

Date/Time Sampled: 6/15/2016 2:05:00PM

Date/Time Received: 6/16/2016 2:25:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	81	25	10	mg/L	SM 2540 C		1	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	4.6	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 21:44	6060444	RLC
Fluoride	0.28	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 10:18	06/17/16 21:44	6060444	RLC
Sulfate	5.7	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 10:18	06/17/16 21:44	6060444	RLC



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July 01, 2016

Report No.: AZF0648

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060473 - SM 2540 C											
Blank (6060473-BLK1)						Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6060473-BS1)						Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	429	10	10	mg/L	400.00		107	84-108			
Duplicate (6060473-DUP1)						Source: AZF0646-11 Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	34	25	10	mg/L		35			3	10	
Duplicate (6060473-DUP2)						Source: AZF0648-04 Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	39	25	10	mg/L		47			19	10	QR-03
Batch 6060474 - SM 2540 C											
Blank (6060474-BLK1)						Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6060474-BS1)						Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	424	10	10	mg/L	400.00		106	84-108			
Duplicate (6060474-DUP1)						Source: AZF0646-09 Prepared & Analyzed: 06/20/16					
Total Dissolved Solids	20	25	10	mg/L		ND				10	J
Batch 6060507 - SM 2540 C											
Blank (6060507-BLK1)						Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	ND	10	10	mg/L							



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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

July 01, 2016

Report No.: AZF0648

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060507 - SM 2540 C											
LCS (6060507-BS1)						Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	384	10	10	mg/L	400.00		96	84-108			
Duplicate (6060507-DUP2)						Source: AZF0655-01 Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	1880	10	10	mg/L		1880			0.05	10	



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0648

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060444 - EPA 300.0											
Blank (6060444-BLK1)						Prepared & Analyzed: 06/17/16					
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 (6060444-BS1)						Prepared & Analyzed: 06/17/16					
Chloride	9.75	0.25	0.01	mg/L	10.010		97	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.010		101	90-110			
Sulfate	9.95	1.0	0.05	mg/L	10.010		99	90-110			
Matrix Spike (6060444-MS1)						Source: AZF0648-04RE1			Prepared & Analyzed: 06/17/16		
Chloride	12.4	0.25	0.01	mg/L	10.010	3.41	90	90-110			
Fluoride	10.4	0.30	0.02	mg/L	10.010	ND	103	90-110			
Sulfate	10.3	1.0	0.05	mg/L	10.010	0.62	97	90-110			
Matrix Spike (6060444-MS2)						Source: AZF0648-15			Prepared & Analyzed: 06/17/16		
Chloride	12.2	0.25	0.01	mg/L	10.010	3.33	88	90-110			QM-05
Fluoride	9.03	0.30	0.02	mg/L	10.010	ND	90	90-110			
Sulfate	9.68	1.0	0.05	mg/L	10.010	0.80	89	90-110			QM-05
Matrix Spike Dup (6060444-MSD1)						Source: AZF0648-04RE1			Prepared & Analyzed: 06/17/16		
Chloride	12.9	0.25	0.01	mg/L	10.010	3.41	95	90-110	4	15	
Fluoride	10.7	0.30	0.02	mg/L	10.010	ND	107	90-110	3	15	
Sulfate	10.6	1.0	0.05	mg/L	10.010	0.62	100	90-110	3	15	



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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 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

- QR-03** The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to suspected matrix interference and/or non-homogeneous sample matrix.
- QM-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- 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
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LOG-IN CHECKLIST

Printed: 7/1/2016 3:18:03PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 06/16/16 14:25

Work Order: AZF0648

Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 16

#Containers: 48

Minimum Temp(C): 4.0

Maximum Temp(C): 4.0

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 22, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 92301877

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 LF #4

Pace Project No.: 92301877

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 LF #4

Pace Project No.: 92301877

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92301877001	GWA-14	Water	06/14/16 13:08	06/17/16 09:30
92301877002	GWA-2	Water	06/14/16 10:45	06/17/16 09:30
92301877003	GWA-3	Water	06/14/16 12:48	06/17/16 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92301877001	GWA-14	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301877002	GWA-2	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301877003	GWA-3	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

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SUMMARY OF DETECTION

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92301877001	GWA-14					
EPA 6020B	Barium	0.012	mg/L	0.010	06/20/16 14:51	
EPA 6020B	Beryllium	0.00044J	mg/L	0.0030	06/20/16 14:51	
EPA 6020B	Boron	0.0098J	mg/L	0.10	06/20/16 14:51	B
EPA 6020B	Cadmium	0.00062J	mg/L	0.0010	06/20/16 14:51	
EPA 6020B	Calcium	0.62	mg/L	0.50	06/20/16 14:51	
EPA 6020B	Chromium	0.00086J	mg/L	0.010	06/20/16 14:51	
EPA 6020B	Cobalt	0.00048J	mg/L	0.010	06/20/16 14:51	
EPA 6020B	Lithium	0.0017J	mg/L	0.050	06/20/16 14:51	
EPA 6020B	Nickel	0.00052J	mg/L	0.010	06/20/16 14:51	
EPA 6020B	Vanadium	0.00033J	mg/L	0.010	06/20/16 14:51	
EPA 6020B	Zinc	0.0036J	mg/L	0.010	06/20/16 14:51	
92301877002	GWA-2					
EPA 6020B	Barium	0.030	mg/L	0.010	06/20/16 14:55	
EPA 6020B	Beryllium	0.00065J	mg/L	0.0030	06/20/16 14:55	
EPA 6020B	Boron	0.012J	mg/L	0.10	06/20/16 14:55	B
EPA 6020B	Calcium	0.72	mg/L	0.50	06/20/16 14:55	
EPA 6020B	Chromium	0.0017J	mg/L	0.010	06/20/16 14:55	
EPA 6020B	Cobalt	0.0010J	mg/L	0.010	06/20/16 14:55	
EPA 6020B	Lithium	0.0012J	mg/L	0.050	06/20/16 14:55	
EPA 6020B	Nickel	0.00060J	mg/L	0.010	06/20/16 14:55	
EPA 6020B	Vanadium	0.00044J	mg/L	0.010	06/20/16 14:55	
EPA 6020B	Zinc	0.0043J	mg/L	0.010	06/20/16 14:55	
92301877003	GWA-3					
EPA 6020B	Barium	0.024	mg/L	0.010	06/20/16 15:10	
EPA 6020B	Beryllium	0.00032J	mg/L	0.0030	06/20/16 15:10	
EPA 6020B	Boron	0.0077J	mg/L	0.10	06/20/16 15:10	B
EPA 6020B	Calcium	1.0	mg/L	0.50	06/20/16 15:10	
EPA 6020B	Chromium	0.00085J	mg/L	0.010	06/20/16 15:10	
EPA 6020B	Cobalt	0.00044J	mg/L	0.010	06/20/16 15:10	
EPA 6020B	Lithium	0.0017J	mg/L	0.050	06/20/16 15:10	
EPA 6020B	Vanadium	0.00027J	mg/L	0.010	06/20/16 15:10	
EPA 6020B	Zinc	0.0028J	mg/L	0.010	06/20/16 15:10	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Sample: GWA-14		Lab ID: 92301877001		Collected: 06/14/16 13:08		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 14:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 14:51	7440-38-2	
Barium	0.012	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:51	7440-39-3	
Beryllium	0.000044J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 14:51	7440-41-7	
Boron	0.0098J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 14:51	7440-42-8	B
Cadmium	0.000062J	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 14:51	7440-43-9	
Calcium	0.62	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 14:51	7440-70-2	
Chromium	0.00086J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 14:51	7440-47-3	
Cobalt	0.00048J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 14:51	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 14:51	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 14:51	7439-92-1	
Lithium	0.0017J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 14:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:51	7439-98-7	
Nickel	0.00052J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 14:51	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 14:51	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 14:51	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 14:51	7440-28-0	
Vanadium	0.00033J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 14:51	7440-62-2	
Zinc	0.0036J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 14:51	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:24	7439-97-6	

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Sample: GWA-2		Lab ID: 92301877002		Collected: 06/14/16 10:45		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 14:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 14:55	7440-38-2	
Barium	0.030	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:55	7440-39-3	
Beryllium	0.000065J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 14:55	7440-41-7	
Boron	0.012J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 14:55	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 14:55	7440-43-9	
Calcium	0.72	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 14:55	7440-70-2	
Chromium	0.0017J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 14:55	7440-47-3	
Cobalt	0.0010J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 14:55	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 14:55	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 14:55	7439-92-1	
Lithium	0.0012J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 14:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:55	7439-98-7	
Nickel	0.00060J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 14:55	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 14:55	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 14:55	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 14:55	7440-28-0	
Vanadium	0.00044J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 14:55	7440-62-2	
Zinc	0.0043J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 14:55	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:26	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Sample: GWA-3 **Lab ID: 92301877003** Collected: 06/14/16 12:48 Received: 06/17/16 09:30 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	06/18/16 14:00	06/20/16 15:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:10	7440-38-2	
Barium	0.024	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:10	7440-39-3	
Beryllium	0.000032J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:10	7440-41-7	
Boron	0.0077J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:10	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:10	7440-43-9	
Calcium	1.0	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:10	7440-70-2	
Chromium	0.00085J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:10	7440-47-3	
Cobalt	0.00044J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:10	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:10	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:10	7439-92-1	
Lithium	0.0017J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:10	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:10	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:10	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:10	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:10	7440-28-0	
Vanadium	0.00027J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:10	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:10	7440-66-6	
7470 Mercury			Analytical Method: EPA 7470 Preparation Method: EPA 7470						
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:34	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

QC Batch: MERP/9626

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 92301877001, 92301877002, 92301877003

METHOD BLANK: 1759108

Matrix: Water

Associated Lab Samples: 92301877001, 92301877002, 92301877003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/20/16 14:03	

LABORATORY CONTROL SAMPLE: 1759109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759110 1759111

Parameter	Units	92301875001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Mercury	mg/L	ND	.0025	.0025	0.0026	0.0026	104	104	75-125	0	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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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

QC Batch: MPRP/22083 Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A Analysis Description: 6020 MET

Associated Lab Samples: 92301877001, 92301877002, 92301877003

METHOD BLANK: 1759060 Matrix: Water

Associated Lab Samples: 92301877001, 92301877002, 92301877003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/20/16 14:20	
Arsenic	mg/L	ND	0.0050	0.000050	06/20/16 14:20	
Barium	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Beryllium	mg/L	ND	0.0030	0.000020	06/20/16 14:20	
Boron	mg/L	0.0015J	0.10	0.00057	06/20/16 14:20	
Cadmium	mg/L	ND	0.0010	0.000060	06/20/16 14:20	
Calcium	mg/L	ND	0.50	0.10	06/20/16 14:20	
Chromium	mg/L	ND	0.010	0.00010	06/20/16 14:20	
Cobalt	mg/L	ND	0.010	0.000010	06/20/16 14:20	
Copper	mg/L	ND	0.025	0.00012	06/20/16 14:20	
Lead	mg/L	ND	0.0050	0.000080	06/20/16 14:20	
Lithium	mg/L	ND	0.050	0.000070	06/20/16 14:20	
Molybdenum	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Nickel	mg/L	ND	0.010	0.00045	06/20/16 14:20	
Selenium	mg/L	ND	0.010	0.00032	06/20/16 14:20	
Silver	mg/L	ND	0.010	0.000080	06/20/16 14:20	
Thallium	mg/L	ND	0.0010	0.000020	06/20/16 14:20	
Vanadium	mg/L	ND	0.010	0.000070	06/20/16 14:20	
Zinc	mg/L	ND	0.010	0.0024	06/20/16 14:20	

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.067	0.064	97	80-120	
Arsenic	mg/L	.067	0.065	98	80-120	
Barium	mg/L	.067	0.066	99	80-120	
Beryllium	mg/L	.067	0.068	102	80-120	
Boron	mg/L	.067	0.068J	103	80-120	
Cadmium	mg/L	.067	0.066	100	80-120	
Calcium	mg/L	.83	0.84	101	80-120	
Chromium	mg/L	.067	0.066	99	80-120	
Cobalt	mg/L	.067	0.067	100	80-120	
Copper	mg/L	.067	0.067	101	80-120	
Lead	mg/L	.067	0.067	100	80-120	
Lithium	mg/L	.067	0.067	101	80-120	
Molybdenum	mg/L	.067	0.064	96	80-120	
Nickel	mg/L	.067	0.065	98	80-120	
Selenium	mg/L	.067	0.063	94	80-120	
Silver	mg/L	.067	0.065	97	80-120	
Thallium	mg/L	.067	0.068	102	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4
Pace Project No.: 92301877

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.067	0.066	98	80-120	
Zinc	mg/L	.067	0.065	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759062 1759063

Parameter	Units	92301875001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Antimony	mg/L	ND	.067	.067	0.064	0.065	96	97	75-125	2	20	
Arsenic	mg/L	ND	.067	.067	0.065	0.066	98	99	75-125	2	20	
Barium	mg/L	0.024	.067	.067	0.091	0.091	100	101	75-125	1	20	
Beryllium	mg/L	0.00011J	.067	.067	0.065	0.065	97	97	75-125	0	20	
Boron	mg/L	0.0085J	.067	.067	0.072J	0.071J	95	94	75-125	1	20	
Cadmium	mg/L	ND	.067	.067	0.067	0.068	101	101	75-125	1	20	
Calcium	mg/L	0.42J	.83	.83	1.3	1.2	103	98	75-125	3	20	
Chromium	mg/L	0.00072J	.067	.067	0.066	0.067	98	100	75-125	2	20	
Cobalt	mg/L	0.00063J	.067	.067	0.067	0.068	99	101	75-125	2	20	
Copper	mg/L	ND	.067	.067	0.068	0.069	101	103	75-125	2	20	
Lead	mg/L	ND	.067	.067	0.067	0.067	100	101	75-125	1	20	
Lithium	mg/L	0.00080J	.067	.067	0.066	0.066	98	98	75-125	0	20	
Molybdenum	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20	
Nickel	mg/L	ND	.067	.067	0.065	0.067	97	99	75-125	2	20	
Selenium	mg/L	ND	.067	.067	0.065	0.065	98	98	75-125	0	20	
Silver	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20	
Thallium	mg/L	ND	.067	.067	0.067	0.068	101	102	75-125	2	20	
Vanadium	mg/L	0.00015J	.067	.067	0.065	0.066	98	99	75-125	2	20	
Zinc	mg/L	0.0032J	.067	.067	0.069	0.069	98	99	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064 1759065

Parameter	Units	92301881001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Antimony	mg/L	ND	.067	.067	0.065	0.063	97	95	75-125	2	20	
Arsenic	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20	
Barium	mg/L	0.046	.067	.067	0.11	0.11	100	99	75-125	1	20	
Beryllium	mg/L	0.00012J	.067	.067	0.069	0.068	104	102	75-125	1	20	
Boron	mg/L	0.017J	.067	.067	0.083J	0.085J	99	102	75-125	2	20	
Cadmium	mg/L	ND	.067	.067	0.067	0.067	100	100	75-125	0	20	
Calcium	mg/L	3.0	.83	.83	3.9	3.9	105	102	75-125	1	20	
Chromium	mg/L	0.0011J	.067	.067	0.068	0.067	100	99	75-125	1	20	
Cobalt	mg/L	0.0015J	.067	.067	0.068	0.068	100	100	75-125	1	20	
Copper	mg/L	ND	.067	.067	0.069	0.069	104	103	75-125	1	20	
Lead	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20	
Lithium	mg/L	0.0013J	.067	.067	0.069	0.069	101	101	75-125	0	20	
Molybdenum	mg/L	ND	.067	.067	0.065	0.063	98	95	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064		1759065		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92301881001 Result	MS Spike Conc.	MSD Spike Conc.									
Nickel	mg/L	0.00088J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Selenium	mg/L	ND	.067	.067	0.066	0.065	98	97	75-125	2	20		
Silver	mg/L	ND	.067	.067	0.064	0.064	96	96	75-125	0	20		
Thallium	mg/L	ND	.067	.067	0.068	0.067	101	101	75-125	0	20		
Vanadium	mg/L	0.00031J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Zinc	mg/L	0.0027J	.067	.067	0.069	0.069	99	99	75-125	0	20		

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QUALIFIERS

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McIntosh LF #4

Pace Project No.: 92301877

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92301877001	GWA-14	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301877002	GWA-2	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301877003	GWA-3	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301877001	GWA-14	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301877002	GWA-2	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301877003	GWA-3	EPA 7470	MERP/9626	EPA 7470	MERC/9249

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name:

Orange Power Environmental
 Fed Ex UPS USPS Client
 Pace Other: _____

Project #:

WO# : 92301877



92301877

Courier:
 Commercial

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer: T1505

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 3.0

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

Date/Initials Person Examining Contents: 6-17-16

Biological Tissue Frozen? Yes No N/A

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 type="checkbox"/> Yes <input checked="" 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 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>WST</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. HNC3 pH<2
All containers needing preservation are found to be in compliance with EPA recommendation?	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,	NaOH pH>12
ORO/8015 (water) DOC,LLHg	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: 6/17/16

Project Manager SRF Review: KGH

Date: 6/20/16

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)

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 ID: 20160614-01

LAB USE ONLY

Work Order No. 92301877

Reviewed By: _____

Page 1 of 1

Sample Shipment Date:⁸ 06/14/2016

Sample Received Date:⁹ _____

Standard Turnaround Time ¹²

Sampled By:¹⁰ Tracy Wardell, Myles Rogers

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 LF #4

Account Number:⁶ _____

Special Instructions:⁷ CCR + McIntosh #4 State GW

Stephanie Linn

Signature

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

PRESERVATIVE ²⁰			Ice	HNO ₃	HNO ₃	ANALYSIS REQUESTED ²¹		Sample Type	Matrix	No. of Containers	Sample Description ¹⁶
G-Grab	O-Other	C-Compsite				HNO ₃	HNO ₃				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N	N	N	<input type="checkbox"/>	G	GW	3	GNA-14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N	N	N	<input type="checkbox"/>	G	GW	3	GNA-2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N	N	N	<input type="checkbox"/>	G	GW	3	GNA-3

No. of Containers

17	18	19
Sample Type	Matrix	No. of Containers
G	GW	3
G	GW	3
G	GW	3

Metals app. III & IV	EPA 6020 & EPA 7470	McIntosh #4 State GW (Attached)	EPA 6020 & EPA 7470	Cl, F, SO ₄ EPA 300 TDS SM2540C	Radon 220 & 228 pH TDS	NO ₂	NO ₃
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample Type Key: ²²

G-Grab O-Other C-Compsite

Matrix Key: ²³

O-Oil S-Solid SL-Sludge W-Wipe
 SW-Surface Water GW-Ground Water
 WW-Waste Water DW-Drinking Water

Preservative Key: ²⁴

H-Hydrochloric Acid N-Nitric Acid
 S-Sulfuric Acid SH-Sodium Hydroxide
 SP-Sodium Bicarbonate P-Phosphoric Acid
 ST-Sodium Thiosulfate Hsa U-Unpreserved

LAB USE ONLY ¹³	LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶
			Date	Time	
		GNA-14	6/14/16	13:08	
		GNA-2	6/14/16	10:45	
		GNA-3	6/14/16	12:48	

LAB USE ONLY: Sample Receipt Information ²⁸
Relinquished by: ²⁶ <u>MIKUL GAT</u> Date/Time <u>6/14/16 16:45</u>
Received by: ²⁷ <u>Stephanie Linn</u> Date/Time <u>6/16/16 11:30</u>
Relinquished by: <u>[Signature]</u> Date/Time <u>6-16-16 2:15p</u>
Received by: <u>[Signature]</u> Date/Time <u>6-17-16 5:30</u>

June 22, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 92301880

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 LF #4

Pace Project No.: 92301880

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92301880001	GWA-13	Water	06/14/16 11:14	06/17/16 09:30
92301880002	GWA-4	Water	06/14/16 11:20	06/17/16 09:30
92301880003	GWA-5	Water	06/14/16 13:40	06/17/16 09:30

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92301880001	GWA-13	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301880002	GWA-4	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301880003	GWA-5	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

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SUMMARY OF DETECTION

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92301880001	GWA-13					
EPA 6020B	Barium	0.015	mg/L	0.010	06/20/16 15:14	
EPA 6020B	Beryllium	0.000071J	mg/L	0.0030	06/20/16 15:14	
EPA 6020B	Boron	0.0086J	mg/L	0.10	06/20/16 15:14	B
EPA 6020B	Calcium	0.37J	mg/L	0.50	06/20/16 15:14	
EPA 6020B	Chromium	0.0094J	mg/L	0.010	06/20/16 15:14	
EPA 6020B	Cobalt	0.00072J	mg/L	0.010	06/20/16 15:14	
EPA 6020B	Lithium	0.00070J	mg/L	0.050	06/20/16 15:14	
EPA 6020B	Molybdenum	0.00027J	mg/L	0.010	06/20/16 15:14	
EPA 6020B	Vanadium	0.00055J	mg/L	0.010	06/20/16 15:14	
EPA 6020B	Zinc	0.0042J	mg/L	0.010	06/20/16 15:14	
92301880002	GWA-4					
EPA 6020B	Arsenic	0.00016J	mg/L	0.0050	06/20/16 15:18	
EPA 6020B	Barium	0.019	mg/L	0.010	06/20/16 15:18	
EPA 6020B	Beryllium	0.000087J	mg/L	0.0030	06/20/16 15:18	
EPA 6020B	Boron	0.010J	mg/L	0.10	06/20/16 15:18	B
EPA 6020B	Cadmium	0.00013J	mg/L	0.0010	06/20/16 15:18	
EPA 6020B	Calcium	1.1	mg/L	0.50	06/20/16 15:18	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	06/20/16 15:18	
EPA 6020B	Cobalt	0.00040J	mg/L	0.010	06/20/16 15:18	
EPA 6020B	Lithium	0.0020J	mg/L	0.050	06/20/16 15:18	
EPA 6020B	Nickel	0.0013J	mg/L	0.010	06/20/16 15:18	
EPA 6020B	Thallium	0.000036J	mg/L	0.0010	06/20/16 15:18	
EPA 6020B	Vanadium	0.00028J	mg/L	0.010	06/20/16 15:18	
EPA 6020B	Zinc	0.0053J	mg/L	0.010	06/20/16 15:18	
92301880003	GWA-5					
EPA 6020B	Arsenic	0.000050J	mg/L	0.0050	06/20/16 15:22	
EPA 6020B	Barium	0.035	mg/L	0.010	06/20/16 15:22	
EPA 6020B	Beryllium	0.000054J	mg/L	0.0030	06/20/16 15:22	
EPA 6020B	Boron	0.011J	mg/L	0.10	06/20/16 15:22	B
EPA 6020B	Calcium	2.4	mg/L	0.50	06/20/16 15:22	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	06/20/16 15:22	
EPA 6020B	Cobalt	0.00060J	mg/L	0.010	06/20/16 15:22	
EPA 6020B	Copper	0.0021J	mg/L	0.025	06/20/16 15:22	
EPA 6020B	Lead	0.00019J	mg/L	0.0050	06/20/16 15:22	
EPA 6020B	Lithium	0.00080J	mg/L	0.050	06/20/16 15:22	
EPA 6020B	Nickel	0.00054J	mg/L	0.010	06/20/16 15:22	
EPA 6020B	Vanadium	0.00047J	mg/L	0.010	06/20/16 15:22	
EPA 6020B	Zinc	0.0028J	mg/L	0.010	06/20/16 15:22	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Sample: GWA-13		Lab ID: 92301880001		Collected: 06/14/16 11:14		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 15:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:14	7440-38-2	
Barium	0.015	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:14	7440-39-3	
Beryllium	0.000071J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:14	7440-41-7	
Boron	0.0086J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:14	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:14	7440-43-9	
Calcium	0.37J	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:14	7440-70-2	
Chromium	0.0094J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:14	7440-47-3	
Cobalt	0.00072J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:14	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:14	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:14	7439-92-1	
Lithium	0.00070J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:14	7439-93-2	
Molybdenum	0.00027J	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:14	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:14	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:14	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:14	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:14	7440-28-0	
Vanadium	0.00055J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:14	7440-62-2	
Zinc	0.0042J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:14	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:37	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Sample: GWA-4 **Lab ID: 92301880002** Collected: 06/14/16 11:20 Received: 06/17/16 09:30 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	06/18/16 14:00	06/20/16 15:18	7440-36-0	
Arsenic	0.00016J	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:18	7440-38-2	
Barium	0.019	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:18	7440-39-3	
Beryllium	0.000087J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:18	7440-41-7	
Boron	0.010J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:18	7440-42-8	B
Cadmium	0.00013J	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:18	7440-43-9	
Calcium	1.1	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:18	7440-70-2	
Chromium	0.0013J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:18	7440-47-3	
Cobalt	0.00040J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:18	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:18	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:18	7439-92-1	
Lithium	0.0020J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:18	7439-98-7	
Nickel	0.0013J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:18	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:18	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:18	7440-22-4	
Thallium	0.000036J	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:18	7440-28-0	
Vanadium	0.00028J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:18	7440-62-2	
Zinc	0.0053J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:18	7440-66-6	
7470 Mercury			Analytical Method: EPA 7470 Preparation Method: EPA 7470						
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:40	7439-97-6	

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Sample: GWA-5 **Lab ID: 92301880003** Collected: 06/14/16 13:40 Received: 06/17/16 09:30 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	06/18/16 14:00	06/20/16 15:22	7440-36-0	
Arsenic	0.00050J	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:22	7440-38-2	
Barium	0.035	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:22	7440-39-3	
Beryllium	0.000054J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:22	7440-41-7	
Boron	0.011J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:22	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:22	7440-43-9	
Calcium	2.4	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:22	7440-70-2	
Chromium	0.0011J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:22	7440-47-3	
Cobalt	0.00060J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:22	7440-48-4	
Copper	0.0021J	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:22	7440-50-8	
Lead	0.00019J	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:22	7439-92-1	
Lithium	0.00080J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:22	7439-98-7	
Nickel	0.00054J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:22	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:22	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:22	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:22	7440-28-0	
Vanadium	0.00047J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:22	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:22	7440-66-6	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:42	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

QC Batch: MERP/9626

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 92301880001, 92301880002, 92301880003

METHOD BLANK: 1759108

Matrix: Water

Associated Lab Samples: 92301880001, 92301880002, 92301880003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/20/16 14:03	

LABORATORY CONTROL SAMPLE: 1759109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759110 1759111

Parameter	Units	92301875001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Mercury	mg/L	ND	.0025	.0025	0.0026	0.0026	104	104	75-125	0	25		

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

QC Batch: MPRP/22083 Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A Analysis Description: 6020 MET

Associated Lab Samples: 92301880001, 92301880002, 92301880003

METHOD BLANK: 1759060 Matrix: Water

Associated Lab Samples: 92301880001, 92301880002, 92301880003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/20/16 14:20	
Arsenic	mg/L	ND	0.0050	0.000050	06/20/16 14:20	
Barium	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Beryllium	mg/L	ND	0.0030	0.000020	06/20/16 14:20	
Boron	mg/L	0.0015J	0.10	0.00057	06/20/16 14:20	
Cadmium	mg/L	ND	0.0010	0.000060	06/20/16 14:20	
Calcium	mg/L	ND	0.50	0.10	06/20/16 14:20	
Chromium	mg/L	ND	0.010	0.00010	06/20/16 14:20	
Cobalt	mg/L	ND	0.010	0.000010	06/20/16 14:20	
Copper	mg/L	ND	0.025	0.00012	06/20/16 14:20	
Lead	mg/L	ND	0.0050	0.000080	06/20/16 14:20	
Lithium	mg/L	ND	0.050	0.000070	06/20/16 14:20	
Molybdenum	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Nickel	mg/L	ND	0.010	0.00045	06/20/16 14:20	
Selenium	mg/L	ND	0.010	0.00032	06/20/16 14:20	
Silver	mg/L	ND	0.010	0.000080	06/20/16 14:20	
Thallium	mg/L	ND	0.0010	0.000020	06/20/16 14:20	
Vanadium	mg/L	ND	0.010	0.000070	06/20/16 14:20	
Zinc	mg/L	ND	0.010	0.0024	06/20/16 14:20	

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.067	0.064	97	80-120	
Arsenic	mg/L	.067	0.065	98	80-120	
Barium	mg/L	.067	0.066	99	80-120	
Beryllium	mg/L	.067	0.068	102	80-120	
Boron	mg/L	.067	0.068J	103	80-120	
Cadmium	mg/L	.067	0.066	100	80-120	
Calcium	mg/L	.83	0.84	101	80-120	
Chromium	mg/L	.067	0.066	99	80-120	
Cobalt	mg/L	.067	0.067	100	80-120	
Copper	mg/L	.067	0.067	101	80-120	
Lead	mg/L	.067	0.067	100	80-120	
Lithium	mg/L	.067	0.067	101	80-120	
Molybdenum	mg/L	.067	0.064	96	80-120	
Nickel	mg/L	.067	0.065	98	80-120	
Selenium	mg/L	.067	0.063	94	80-120	
Silver	mg/L	.067	0.065	97	80-120	
Thallium	mg/L	.067	0.068	102	80-120	

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4
Pace Project No.: 92301880

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.067	0.066	98	80-120	
Zinc	mg/L	.067	0.065	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759062 1759063

Parameter	Units	92301875001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	mg/L	ND	.067	.067	0.064	0.065	96	97	75-125	2	20		
Arsenic	mg/L	ND	.067	.067	0.065	0.066	98	99	75-125	2	20		
Barium	mg/L	0.024	.067	.067	0.091	0.091	100	101	75-125	1	20		
Beryllium	mg/L	0.00011J	.067	.067	0.065	0.065	97	97	75-125	0	20		
Boron	mg/L	0.0085J	.067	.067	0.072J	0.071J	95	94	75-125	1	20		
Cadmium	mg/L	ND	.067	.067	0.067	0.068	101	101	75-125	1	20		
Calcium	mg/L	0.42J	.83	.83	1.3	1.2	103	98	75-125	3	20		
Chromium	mg/L	0.00072J	.067	.067	0.066	0.067	98	100	75-125	2	20		
Cobalt	mg/L	0.00063J	.067	.067	0.067	0.068	99	101	75-125	2	20		
Copper	mg/L	ND	.067	.067	0.068	0.069	101	103	75-125	2	20		
Lead	mg/L	ND	.067	.067	0.067	0.067	100	101	75-125	1	20		
Lithium	mg/L	0.00080J	.067	.067	0.066	0.066	98	98	75-125	0	20		
Molybdenum	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20		
Nickel	mg/L	ND	.067	.067	0.065	0.067	97	99	75-125	2	20		
Selenium	mg/L	ND	.067	.067	0.065	0.065	98	98	75-125	0	20		
Silver	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20		
Thallium	mg/L	ND	.067	.067	0.067	0.068	101	102	75-125	2	20		
Vanadium	mg/L	0.00015J	.067	.067	0.065	0.066	98	99	75-125	2	20		
Zinc	mg/L	0.0032J	.067	.067	0.069	0.069	98	99	75-125	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064 1759065

Parameter	Units	92301881001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	mg/L	ND	.067	.067	0.065	0.063	97	95	75-125	2	20		
Arsenic	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20		
Barium	mg/L	0.046	.067	.067	0.11	0.11	100	99	75-125	1	20		
Beryllium	mg/L	0.00012J	.067	.067	0.069	0.068	104	102	75-125	1	20		
Boron	mg/L	0.017J	.067	.067	0.083J	0.085J	99	102	75-125	2	20		
Cadmium	mg/L	ND	.067	.067	0.067	0.067	100	100	75-125	0	20		
Calcium	mg/L	3.0	.83	.83	3.9	3.9	105	102	75-125	1	20		
Chromium	mg/L	0.0011J	.067	.067	0.068	0.067	100	99	75-125	1	20		
Cobalt	mg/L	0.0015J	.067	.067	0.068	0.068	100	100	75-125	1	20		
Copper	mg/L	ND	.067	.067	0.069	0.069	104	103	75-125	1	20		
Lead	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20		
Lithium	mg/L	0.0013J	.067	.067	0.069	0.069	101	101	75-125	0	20		
Molybdenum	mg/L	ND	.067	.067	0.065	0.063	98	95	75-125	3	20		

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064		1759065		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92301881001 Result	MS Spike Conc.	MSD Spike Conc.									
Nickel	mg/L	0.00088J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Selenium	mg/L	ND	.067	.067	0.066	0.065	98	97	75-125	2	20		
Silver	mg/L	ND	.067	.067	0.064	0.064	96	96	75-125	0	20		
Thallium	mg/L	ND	.067	.067	0.068	0.067	101	101	75-125	0	20		
Vanadium	mg/L	0.00031J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Zinc	mg/L	0.0027J	.067	.067	0.069	0.069	99	99	75-125	0	20		

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QUALIFIERS

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McIntosh LF #4

Pace Project No.: 92301880

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92301880001	GWA-13	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301880002	GWA-4	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301880003	GWA-5	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301880001	GWA-13	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301880002	GWA-4	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301880003	GWA-5	EPA 7470	MERP/9626	EPA 7470	MERC/9249

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: Origina Power Environmental **Project #:** _____

WO# : 92301880

 92301880

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

Custody Seal Present? Yes No **Seals Intact?** Yes No

Date/Initials Person Examining Contents: 6-17-16

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer: T1505 **Type of Ice:** Wet Blue None Samples on ice, cooling process has begun

Correction Factor: 0.0°C **Cooler Temp Corrected (°C):** 3.0 **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 type="checkbox"/> Yes <input checked="" 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>WST</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. HNC3 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) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	H2SO4 pH<2
Exceptions: VOA, Coliform, TOC, Oil and Grease, <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	NaOH pH>12
PRO/8015 (water) DOC,LLHg <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	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:** 6/17/16

Project Manager SRF Review: WTA **Date:** 6/20/16

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)

Georgia Power Environmental Laboratory
 NELAP Certification #E57554
 2480 Manner Road, BIN 39110
 Atlanta, Georgia 30339

Custody Seal ID: 20100014-02

Phone: (404) 799-2100
 Company: 8-530-2100

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 CCR + McIntosh #4 State GW

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY

Work Order No. 92301 SS-D
 Reviewed By: _____

Page 1 of 1

Sample Shipment Date: ⁸ 06/14/10
 Sample Received Date: ⁹ _____

Sampled By: ¹⁰ Wyles Rogers, Amanda Stormer

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

¹² Standard Turnaround Time

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

PRESERVATIVE ²⁰			
HNO3	HNO3	Ice	HNO3
N	N	I	N
ANALYSIS REQUESTED ²¹			

Sample Type Key: ²²
 G-Grab O-Other C-Composite
 Matrix Key: ²³
 O-Oil S-Solid SL-Sludge W-Water
 SW-Surface Water GW-Grand Water
 WW-Waste Water DW-Drinking Water

Preservative Key: ²⁴
 H-Hydrochloric Acid N-Nitric Acid
 S-Sulfuric Acid SH-Sodium Hydroxide
 SB-Sodium Borohydride P-Phosphoric Acid
 ST-Sodium Thiosulfate L-Ascorbic Acid
 U-Ultraprecipitated

LAB USE ONLY ¹³	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type ¹⁷	Matrix ¹⁸	No. of Containers ¹⁹	ANALYSIS REQUESTED ²¹				Comments ²⁵
		Date	Time					Metals app. III & IV EPA 6020 & EPA 7470	McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470	Cl, F, SO4 EPA 300 TDS SM2540C	Radium 226 & 228 G-Tech	
	GNA-13	6/14/10	11:14		G	GW	3	✓	✓	✓	✓	001
	GNA-4	6/14/10	11:20		G	GW	3	✓	✓	✓	✓	002
	GNA-5	6/14/10	13:40		G	GW	3	✓	✓	✓	✓	003

LAB USE ONLY: Sample Receipt Information ²⁸

Relinquished by: ²⁶ AMM STB Date/Time 6/14/10 16:15
 Received by: ²⁷ [Signature] Date/Time 6/16/10 11:30
 Relinquished by: [Signature] Date/Time 6-16-10 @ 11:30
 Received by: KIRKMAN PEARCE III Date/Time 6/17/10 9:30

June 22, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 92301875

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 LF #4

Pace Project No.: 92301875

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92301875001	GWA-16	Water	06/15/16 10:20	06/17/16 09:30
92301875002	GWC-17	Water	06/15/16 13:00	06/17/16 09:30
92301875003	FB-1	Water	06/15/16 14:30	06/17/16 09:30
92301875004	FERB-1	Water	06/15/16 14:40	06/17/16 09:30

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92301875001	GWA-16	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301875002	GWC-17	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301875003	FB-1	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301875004	FERB-1	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92301875001	GWA-16					
EPA 6020B	Barium	0.024	mg/L	0.010	06/20/16 14:28	
EPA 6020B	Beryllium	0.00011J	mg/L	0.0030	06/20/16 14:28	
EPA 6020B	Boron	0.0085J	mg/L	0.10	06/20/16 14:28	B
EPA 6020B	Calcium	0.42J	mg/L	0.50	06/20/16 14:28	
EPA 6020B	Chromium	0.00072J	mg/L	0.010	06/20/16 14:28	
EPA 6020B	Cobalt	0.00063J	mg/L	0.010	06/20/16 14:28	
EPA 6020B	Lithium	0.00080J	mg/L	0.050	06/20/16 14:28	
EPA 6020B	Vanadium	0.00015J	mg/L	0.010	06/20/16 14:28	
EPA 6020B	Zinc	0.0032J	mg/L	0.010	06/20/16 14:28	
92301875002	GWC-17					
EPA 6020B	Arsenic	0.00015J	mg/L	0.0050	06/20/16 14:39	
EPA 6020B	Barium	0.017	mg/L	0.010	06/20/16 14:39	
EPA 6020B	Beryllium	0.00056J	mg/L	0.0030	06/20/16 14:39	
EPA 6020B	Boron	0.0095J	mg/L	0.10	06/20/16 14:39	B
EPA 6020B	Cadmium	0.00055J	mg/L	0.0010	06/20/16 14:39	
EPA 6020B	Calcium	2.2	mg/L	0.50	06/20/16 14:39	
EPA 6020B	Chromium	0.0018J	mg/L	0.010	06/20/16 14:39	
EPA 6020B	Cobalt	0.00073J	mg/L	0.010	06/20/16 14:39	
EPA 6020B	Lithium	0.0020J	mg/L	0.050	06/20/16 14:39	
EPA 6020B	Molybdenum	0.00030J	mg/L	0.010	06/20/16 14:39	
EPA 6020B	Nickel	0.0018J	mg/L	0.010	06/20/16 14:39	
EPA 6020B	Thallium	0.000038J	mg/L	0.0010	06/20/16 14:39	
EPA 6020B	Vanadium	0.00047J	mg/L	0.010	06/20/16 14:39	
EPA 6020B	Zinc	0.0053J	mg/L	0.010	06/20/16 14:39	
92301875003	FB-1					
EPA 6020B	Barium	0.00016J	mg/L	0.010	06/20/16 14:43	
EPA 6020B	Lithium	0.000082J	mg/L	0.050	06/20/16 14:43	
92301875004	FERB-1					
EPA 6020B	Chromium	0.00010J	mg/L	0.010	06/20/16 14:47	
EPA 6020B	Vanadium	0.00023J	mg/L	0.010	06/20/16 14:47	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Sample: GWA-16 **Lab ID: 92301875001** Collected: 06/15/16 10:20 Received: 06/17/16 09:30 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	06/18/16 14:00	06/20/16 14:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 14:28	7440-38-2	
Barium	0.024	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:28	7440-39-3	
Beryllium	0.00011J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 14:28	7440-41-7	
Boron	0.0085J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 14:28	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 14:28	7440-43-9	
Calcium	0.42J	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 14:28	7440-70-2	
Chromium	0.00072J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 14:28	7440-47-3	
Cobalt	0.00063J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 14:28	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 14:28	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 14:28	7439-92-1	
Lithium	0.00080J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 14:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:28	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 14:28	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 14:28	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 14:28	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 14:28	7440-28-0	
Vanadium	0.00015J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 14:28	7440-62-2	
Zinc	0.0032J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 14:28	7440-66-6	
7470 Mercury			Analytical Method: EPA 7470 Preparation Method: EPA 7470						
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:08	7439-97-6	

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Sample: GWC-17		Lab ID: 92301875002		Collected: 06/15/16 13:00	Received: 06/17/16 09:30	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	06/18/16 14:00	06/20/16 14:39	7440-36-0		
Arsenic	0.00015J	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 14:39	7440-38-2		
Barium	0.017	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:39	7440-39-3		
Beryllium	0.00056J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 14:39	7440-41-7		
Boron	0.0095J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 14:39	7440-42-8	B	
Cadmium	0.00055J	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 14:39	7440-43-9		
Calcium	2.2	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 14:39	7440-70-2		
Chromium	0.0018J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 14:39	7440-47-3		
Cobalt	0.00073J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 14:39	7440-48-4		
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 14:39	7440-50-8		
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 14:39	7439-92-1		
Lithium	0.0020J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 14:39	7439-93-2		
Molybdenum	0.00030J	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:39	7439-98-7		
Nickel	0.0018J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 14:39	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 14:39	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 14:39	7440-22-4		
Thallium	0.000038J	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 14:39	7440-28-0		
Vanadium	0.00047J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 14:39	7440-62-2		
Zinc	0.0053J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 14:39	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:16	7439-97-6		

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Sample: FB-1		Lab ID: 92301875003		Collected: 06/15/16 14:30	Received: 06/17/16 09:30	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	06/18/16 14:00	06/20/16 14:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 14:43	7440-38-2		
Barium	0.00016J	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:43	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 14:43	7440-41-7		
Boron	ND	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 14:43	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 14:43	7440-43-9		
Calcium	ND	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 14:43	7440-70-2		
Chromium	ND	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 14:43	7440-47-3		
Cobalt	ND	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 14:43	7440-48-4		
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 14:43	7440-50-8		
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 14:43	7439-92-1		
Lithium	0.000082J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 14:43	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:43	7439-98-7		
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 14:43	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 14:43	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 14:43	7440-22-4		
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 14:43	7440-28-0		
Vanadium	ND	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 14:43	7440-62-2		
Zinc	ND	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 14:43	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:19	7439-97-6		

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Sample: FERB-1		Lab ID: 92301875004		Collected: 06/15/16 14:40		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 14:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 14:47	7440-38-2	
Barium	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 14:47	7440-41-7	
Boron	ND	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 14:47	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 14:47	7440-43-9	
Calcium	ND	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 14:47	7440-70-2	
Chromium	0.00010J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 14:47	7440-47-3	
Cobalt	ND	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 14:47	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 14:47	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 14:47	7439-92-1	
Lithium	ND	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 14:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 14:47	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 14:47	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 14:47	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 14:47	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 14:47	7440-28-0	
Vanadium	0.00023J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 14:47	7440-62-2	
Zinc	ND	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 14:47	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:21	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

QC Batch: MERP/9626

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 92301875001, 92301875002, 92301875003, 92301875004

METHOD BLANK: 1759108

Matrix: Water

Associated Lab Samples: 92301875001, 92301875002, 92301875003, 92301875004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/20/16 14:03	

LABORATORY CONTROL SAMPLE: 1759109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759110 1759111

Parameter	Units	92301875001		1759110		1759111		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Mercury	mg/L	ND	.0025	.0025	.0025	0.0026	0.0026	104	104	75-125	0	25

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

QC Batch: MPRP/22083 Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A Analysis Description: 6020 MET

Associated Lab Samples: 92301875001, 92301875002, 92301875003, 92301875004

METHOD BLANK: 1759060 Matrix: Water

Associated Lab Samples: 92301875001, 92301875002, 92301875003, 92301875004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/20/16 14:20	
Arsenic	mg/L	ND	0.0050	0.000050	06/20/16 14:20	
Barium	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Beryllium	mg/L	ND	0.0030	0.000020	06/20/16 14:20	
Boron	mg/L	0.0015J	0.10	0.00057	06/20/16 14:20	
Cadmium	mg/L	ND	0.0010	0.000060	06/20/16 14:20	
Calcium	mg/L	ND	0.50	0.10	06/20/16 14:20	
Chromium	mg/L	ND	0.010	0.00010	06/20/16 14:20	
Cobalt	mg/L	ND	0.010	0.000010	06/20/16 14:20	
Copper	mg/L	ND	0.025	0.00012	06/20/16 14:20	
Lead	mg/L	ND	0.0050	0.000080	06/20/16 14:20	
Lithium	mg/L	ND	0.050	0.000070	06/20/16 14:20	
Molybdenum	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Nickel	mg/L	ND	0.010	0.00045	06/20/16 14:20	
Selenium	mg/L	ND	0.010	0.00032	06/20/16 14:20	
Silver	mg/L	ND	0.010	0.000080	06/20/16 14:20	
Thallium	mg/L	ND	0.0010	0.000020	06/20/16 14:20	
Vanadium	mg/L	ND	0.010	0.000070	06/20/16 14:20	
Zinc	mg/L	ND	0.010	0.0024	06/20/16 14:20	

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.067	0.064	97	80-120	
Arsenic	mg/L	.067	0.065	98	80-120	
Barium	mg/L	.067	0.066	99	80-120	
Beryllium	mg/L	.067	0.068	102	80-120	
Boron	mg/L	.067	0.068J	103	80-120	
Cadmium	mg/L	.067	0.066	100	80-120	
Calcium	mg/L	.83	0.84	101	80-120	
Chromium	mg/L	.067	0.066	99	80-120	
Cobalt	mg/L	.067	0.067	100	80-120	
Copper	mg/L	.067	0.067	101	80-120	
Lead	mg/L	.067	0.067	100	80-120	
Lithium	mg/L	.067	0.067	101	80-120	
Molybdenum	mg/L	.067	0.064	96	80-120	
Nickel	mg/L	.067	0.065	98	80-120	
Selenium	mg/L	.067	0.063	94	80-120	
Silver	mg/L	.067	0.065	97	80-120	
Thallium	mg/L	.067	0.068	102	80-120	

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.067	0.066	98	80-120	
Zinc	mg/L	.067	0.065	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759062 1759063

Parameter	Units	92301875001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	mg/L	ND	.067	.067	0.064	0.065	96	97	75-125	2	20		
Arsenic	mg/L	ND	.067	.067	0.065	0.066	98	99	75-125	2	20		
Barium	mg/L	0.024	.067	.067	0.091	0.091	100	101	75-125	1	20		
Beryllium	mg/L	0.00011J	.067	.067	0.065	0.065	97	97	75-125	0	20		
Boron	mg/L	0.0085J	.067	.067	0.072J	0.071J	95	94	75-125	1	20		
Cadmium	mg/L	ND	.067	.067	0.067	0.068	101	101	75-125	1	20		
Calcium	mg/L	0.42J	.83	.83	1.3	1.2	103	98	75-125	3	20		
Chromium	mg/L	0.00072J	.067	.067	0.066	0.067	98	100	75-125	2	20		
Cobalt	mg/L	0.00063J	.067	.067	0.067	0.068	99	101	75-125	2	20		
Copper	mg/L	ND	.067	.067	0.068	0.069	101	103	75-125	2	20		
Lead	mg/L	ND	.067	.067	0.067	0.067	100	101	75-125	1	20		
Lithium	mg/L	0.00080J	.067	.067	0.066	0.066	98	98	75-125	0	20		
Molybdenum	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20		
Nickel	mg/L	ND	.067	.067	0.065	0.067	97	99	75-125	2	20		
Selenium	mg/L	ND	.067	.067	0.065	0.065	98	98	75-125	0	20		
Silver	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20		
Thallium	mg/L	ND	.067	.067	0.067	0.068	101	102	75-125	2	20		
Vanadium	mg/L	0.00015J	.067	.067	0.065	0.066	98	99	75-125	2	20		
Zinc	mg/L	0.0032J	.067	.067	0.069	0.069	98	99	75-125	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064 1759065

Parameter	Units	92301881001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	mg/L	ND	.067	.067	0.065	0.063	97	95	75-125	2	20		
Arsenic	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20		
Barium	mg/L	0.046	.067	.067	0.11	0.11	100	99	75-125	1	20		
Beryllium	mg/L	0.00012J	.067	.067	0.069	0.068	104	102	75-125	1	20		
Boron	mg/L	0.017J	.067	.067	0.083J	0.085J	99	102	75-125	2	20		
Cadmium	mg/L	ND	.067	.067	0.067	0.067	100	100	75-125	0	20		
Calcium	mg/L	3.0	.83	.83	3.9	3.9	105	102	75-125	1	20		
Chromium	mg/L	0.0011J	.067	.067	0.068	0.067	100	99	75-125	1	20		
Cobalt	mg/L	0.0015J	.067	.067	0.068	0.068	100	100	75-125	1	20		
Copper	mg/L	ND	.067	.067	0.069	0.069	104	103	75-125	1	20		
Lead	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20		
Lithium	mg/L	0.0013J	.067	.067	0.069	0.069	101	101	75-125	0	20		
Molybdenum	mg/L	ND	.067	.067	0.065	0.063	98	95	75-125	3	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064		1759065		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92301881001 Result	MS Spike Conc.	MSD Spike Conc.									
Nickel	mg/L	0.00088J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Selenium	mg/L	ND	.067	.067	0.066	0.065	98	97	75-125	2	20		
Silver	mg/L	ND	.067	.067	0.064	0.064	96	96	75-125	0	20		
Thallium	mg/L	ND	.067	.067	0.068	0.067	101	101	75-125	0	20		
Vanadium	mg/L	0.00031J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Zinc	mg/L	0.0027J	.067	.067	0.069	0.069	99	99	75-125	0	20		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McIntosh LF #4

Pace Project No.: 92301875

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92301875001	GWA-16	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301875002	GWC-17	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301875003	FB-1	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301875004	FERB-1	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301875001	GWA-16	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301875002	GWC-17	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301875003	FB-1	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301875004	FERB-1	EPA 7470	MERP/9626	EPA 7470	MERC/9249

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: So. Orange Power Environmental Project: Environmental

WO#: **92301875**



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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Date/Initials Person Examining Contents: 6-17-16

Thermometer: T1505 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 3.0

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

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

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Sample Discrepancy: _____

Project Manager SCURF Review: MS Date: 6/17/16

Project Manager SRF Review: ICBA Date: 6/20/16

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)

Custody seal ID: 20160915-01

LAB USE ONLY

Work Order No. 92301875

Reviewed By: _____

Page 1 of 1

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 CCR + McIntosh #4 State GW

Sample Shipment Date: ⁸ 09/15/16
 Sample Received Date: ⁹ _____
 Sampled By: ¹⁰ Amanda Spomer

Stephanie Shum
 Signature

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

PRESERVATIVE ²⁰

HNO3	HNO3	Ice	HNO3	HNO3
N	N	I	M	N

ANALYSIS REQUESTED ²¹

Sample Type Key: ²²

G-Graze O-Other C-Composite

Matrix Key: ²³

O-Oil S-Solid SL-Sludge W-Water
 SW-Surface Water GW-Grand Water
 WW-Waste Water DW-Drinking Water

Preservative Key: ²⁴

H-Hydrochloric Acid N-Nitric Acid
 S-Sulfuric Acid SH-Sodium Hydroxide
 SB-Sodium Borate P-Phosphoric Acid
 ST-Sodium Thiosulfate L-Ascorbic Acid
 U-Unpreserved

LAB USE ONLY ¹³	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type ¹⁷	Matrix ¹⁸	No. of Containers ¹⁹	Metals app. III & IV EPA 6020 & EPA 7470					McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470		Cl, F, SO4 EPA 300 TDS SM2540C		Radium 226 & 228 Ga Tech		Comments ²⁵
		Date	Time																
	GWA-16	09/15/16	10:20		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	001
	GWC-17	09/15/16	13:00		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	002
	FB-1	09/15/16	14:30		G	D1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	003
	FERB-1	09/15/16	14:40		G	D1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	004

LAB USE ONLY: Sample Receipt Information ²⁸

Relinquished by: ²⁶ *MSP* Date/Time 09/15/16
 Received by: ²⁷ *Amanda Spomer* Date/Time 09/16/16 @ 11:30
 Relinquished by: _____ Date/Time _____
 Received by: *Kenneth Spomer III* Date/Time 09-17-16 9:30

* D1 = Distilled Water

June 22, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 92301882

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 LF #4

Pace Project No.: 92301882

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 LF #4
Pace Project No.: 92301882

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92301882001	GWA-15	Water	06/15/16 09:43	06/17/16 09:30
92301882002	DUP-1	Water	06/15/16 00:00	06/17/16 09:30
92301882003	GWC-9	Water	06/15/16 11:56	06/17/16 09:30

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92301882001	GWA-15	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301882002	DUP-1	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301882003	GWC-9	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

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SUMMARY OF DETECTION

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92301882001	GWA-15					
EPA 6020B	Barium	0.024	mg/L	0.010	06/20/16 15:45	
EPA 6020B	Beryllium	0.000038J	mg/L	0.0030	06/20/16 15:45	
EPA 6020B	Boron	0.0095J	mg/L	0.10	06/20/16 15:45	B
EPA 6020B	Calcium	0.61	mg/L	0.50	06/20/16 15:45	
EPA 6020B	Chromium	0.00080J	mg/L	0.010	06/20/16 15:45	
EPA 6020B	Cobalt	0.00047J	mg/L	0.010	06/20/16 15:45	
EPA 6020B	Lithium	0.0013J	mg/L	0.050	06/20/16 15:45	
EPA 6020B	Vanadium	0.00030J	mg/L	0.010	06/20/16 15:45	
EPA 6020B	Zinc	0.0028J	mg/L	0.010	06/20/16 15:45	
92301882002	DUP-1					
EPA 6020B	Barium	0.024	mg/L	0.010	06/20/16 16:01	
EPA 6020B	Beryllium	0.000023J	mg/L	0.0030	06/21/16 13:46	
EPA 6020B	Boron	0.0092J	mg/L	0.10	06/20/16 16:01	B
EPA 6020B	Calcium	0.67	mg/L	0.50	06/20/16 16:01	
EPA 6020B	Chromium	0.00082J	mg/L	0.010	06/20/16 16:01	
EPA 6020B	Cobalt	0.00052J	mg/L	0.010	06/20/16 16:01	
EPA 6020B	Lithium	0.0013J	mg/L	0.050	06/21/16 13:46	
EPA 6020B	Vanadium	0.00016J	mg/L	0.010	06/20/16 16:01	
EPA 6020B	Zinc	0.0028J	mg/L	0.010	06/20/16 16:01	
92301882003	GWC-9					
EPA 6020B	Barium	0.024	mg/L	0.010	06/20/16 16:05	
EPA 6020B	Beryllium	0.000077J	mg/L	0.0030	06/21/16 13:50	
EPA 6020B	Boron	0.018J	mg/L	0.10	06/20/16 16:05	
EPA 6020B	Calcium	0.27J	mg/L	0.50	06/20/16 16:05	
EPA 6020B	Chromium	0.00021J	mg/L	0.010	06/20/16 16:05	
EPA 6020B	Cobalt	0.00052J	mg/L	0.010	06/20/16 16:05	
EPA 6020B	Lithium	0.0015J	mg/L	0.050	06/21/16 13:50	
EPA 6020B	Vanadium	0.00019J	mg/L	0.010	06/20/16 16:05	
EPA 6020B	Zinc	0.0037J	mg/L	0.010	06/20/16 16:05	

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Sample: GWA-15		Lab ID: 92301882001		Collected: 06/15/16 09:43		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 15:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:45	7440-38-2	
Barium	0.024	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:45	7440-39-3	
Beryllium	0.000038J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:45	7440-41-7	
Boron	0.0095J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:45	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:45	7440-43-9	
Calcium	0.61	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:45	7440-70-2	
Chromium	0.00080J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:45	7440-47-3	
Cobalt	0.00047J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:45	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:45	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:45	7439-92-1	
Lithium	0.0013J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:45	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:45	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:45	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:45	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:45	7440-28-0	
Vanadium	0.00030J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:45	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:45	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:53	7439-97-6	

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Sample: DUP-1		Lab ID: 92301882002		Collected: 06/15/16 00:00		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 16:01	7440-38-2	
Barium	0.024	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 16:01	7440-39-3	
Beryllium	0.000023J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/21/16 13:46	7440-41-7	
Boron	0.0092J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 16:01	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 16:01	7440-43-9	
Calcium	0.67	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 16:01	7440-70-2	
Chromium	0.00082J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 16:01	7440-47-3	
Cobalt	0.00052J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 16:01	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 16:01	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 16:01	7439-92-1	
Lithium	0.0013J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/21/16 13:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 16:01	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 16:01	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 16:01	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 16:01	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 16:01	7440-28-0	
Vanadium	0.00016J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 16:01	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 16:01	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:56	7439-97-6	

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Sample: GWC-9		Lab ID: 92301882003		Collected: 06/15/16 11:56		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 16:05	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 16:05	7440-38-2		
Barium	0.024	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 16:05	7440-39-3		
Beryllium	0.000077J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/21/16 13:50	7440-41-7		
Boron	0.018J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 16:05	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 16:05	7440-43-9		
Calcium	0.27J	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 16:05	7440-70-2		
Chromium	0.00021J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 16:05	7440-47-3		
Cobalt	0.00052J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 16:05	7440-48-4		
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 16:05	7440-50-8		
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 16:05	7439-92-1		
Lithium	0.0015J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/21/16 13:50	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 16:05	7439-98-7		
Nickel	ND	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 16:05	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 16:05	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 16:05	7440-22-4		
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 16:05	7440-28-0		
Vanadium	0.00019J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 16:05	7440-62-2		
Zinc	0.0037J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 16:05	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:58	7439-97-6		

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

QC Batch: MERP/9626

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 92301882001, 92301882002, 92301882003

METHOD BLANK: 1759108

Matrix: Water

Associated Lab Samples: 92301882001, 92301882002, 92301882003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/20/16 14:03	

LABORATORY CONTROL SAMPLE: 1759109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759110 1759111

Parameter	Units	92301875001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Mercury	mg/L	ND	.0025	.0025	0.0026	0.0026	104	104	75-125	0	25		

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

QC Batch: MPRP/22083 Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A Analysis Description: 6020 MET

Associated Lab Samples: 92301882001, 92301882002, 92301882003

METHOD BLANK: 1759060 Matrix: Water

Associated Lab Samples: 92301882001, 92301882002, 92301882003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/20/16 14:20	
Arsenic	mg/L	ND	0.0050	0.000050	06/20/16 14:20	
Barium	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Beryllium	mg/L	ND	0.0030	0.000020	06/20/16 14:20	
Boron	mg/L	0.0015J	0.10	0.00057	06/20/16 14:20	
Cadmium	mg/L	ND	0.0010	0.000060	06/20/16 14:20	
Calcium	mg/L	ND	0.50	0.10	06/20/16 14:20	
Chromium	mg/L	ND	0.010	0.00010	06/20/16 14:20	
Cobalt	mg/L	ND	0.010	0.000010	06/20/16 14:20	
Copper	mg/L	ND	0.025	0.00012	06/20/16 14:20	
Lead	mg/L	ND	0.0050	0.000080	06/20/16 14:20	
Lithium	mg/L	ND	0.050	0.000070	06/20/16 14:20	
Molybdenum	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Nickel	mg/L	ND	0.010	0.00045	06/20/16 14:20	
Selenium	mg/L	ND	0.010	0.00032	06/20/16 14:20	
Silver	mg/L	ND	0.010	0.000080	06/20/16 14:20	
Thallium	mg/L	ND	0.0010	0.000020	06/20/16 14:20	
Vanadium	mg/L	ND	0.010	0.000070	06/20/16 14:20	
Zinc	mg/L	ND	0.010	0.0024	06/20/16 14:20	

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.067	0.064	97	80-120	
Arsenic	mg/L	.067	0.065	98	80-120	
Barium	mg/L	.067	0.066	99	80-120	
Beryllium	mg/L	.067	0.068	102	80-120	
Boron	mg/L	.067	0.068J	103	80-120	
Cadmium	mg/L	.067	0.066	100	80-120	
Calcium	mg/L	.83	0.84	101	80-120	
Chromium	mg/L	.067	0.066	99	80-120	
Cobalt	mg/L	.067	0.067	100	80-120	
Copper	mg/L	.067	0.067	101	80-120	
Lead	mg/L	.067	0.067	100	80-120	
Lithium	mg/L	.067	0.067	101	80-120	
Molybdenum	mg/L	.067	0.064	96	80-120	
Nickel	mg/L	.067	0.065	98	80-120	
Selenium	mg/L	.067	0.063	94	80-120	
Silver	mg/L	.067	0.065	97	80-120	
Thallium	mg/L	.067	0.068	102	80-120	

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.067	0.066	98	80-120	
Zinc	mg/L	.067	0.065	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759062 1759063

Parameter	Units	92301875001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	mg/L	ND	.067	.067	0.064	0.065	96	97	75-125	2	20		
Arsenic	mg/L	ND	.067	.067	0.065	0.066	98	99	75-125	2	20		
Barium	mg/L	0.024	.067	.067	0.091	0.091	100	101	75-125	1	20		
Beryllium	mg/L	0.00011J	.067	.067	0.065	0.065	97	97	75-125	0	20		
Boron	mg/L	0.0085J	.067	.067	0.072J	0.071J	95	94	75-125	1	20		
Cadmium	mg/L	ND	.067	.067	0.067	0.068	101	101	75-125	1	20		
Calcium	mg/L	0.42J	.83	.83	1.3	1.2	103	98	75-125	3	20		
Chromium	mg/L	0.00072J	.067	.067	0.066	0.067	98	100	75-125	2	20		
Cobalt	mg/L	0.00063J	.067	.067	0.067	0.068	99	101	75-125	2	20		
Copper	mg/L	ND	.067	.067	0.068	0.069	101	103	75-125	2	20		
Lead	mg/L	ND	.067	.067	0.067	0.067	100	101	75-125	1	20		
Lithium	mg/L	0.00080J	.067	.067	0.066	0.066	98	98	75-125	0	20		
Molybdenum	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20		
Nickel	mg/L	ND	.067	.067	0.065	0.067	97	99	75-125	2	20		
Selenium	mg/L	ND	.067	.067	0.065	0.065	98	98	75-125	0	20		
Silver	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20		
Thallium	mg/L	ND	.067	.067	0.067	0.068	101	102	75-125	2	20		
Vanadium	mg/L	0.00015J	.067	.067	0.065	0.066	98	99	75-125	2	20		
Zinc	mg/L	0.0032J	.067	.067	0.069	0.069	98	99	75-125	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064 1759065

Parameter	Units	92301881001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	mg/L	ND	.067	.067	0.065	0.063	97	95	75-125	2	20		
Arsenic	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20		
Barium	mg/L	0.046	.067	.067	0.11	0.11	100	99	75-125	1	20		
Beryllium	mg/L	0.00012J	.067	.067	0.069	0.068	104	102	75-125	1	20		
Boron	mg/L	0.017J	.067	.067	0.083J	0.085J	99	102	75-125	2	20		
Cadmium	mg/L	ND	.067	.067	0.067	0.067	100	100	75-125	0	20		
Calcium	mg/L	3.0	.83	.83	3.9	3.9	105	102	75-125	1	20		
Chromium	mg/L	0.0011J	.067	.067	0.068	0.067	100	99	75-125	1	20		
Cobalt	mg/L	0.0015J	.067	.067	0.068	0.068	100	100	75-125	1	20		
Copper	mg/L	ND	.067	.067	0.069	0.069	104	103	75-125	1	20		
Lead	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20		
Lithium	mg/L	0.0013J	.067	.067	0.069	0.069	101	101	75-125	0	20		
Molybdenum	mg/L	ND	.067	.067	0.065	0.063	98	95	75-125	3	20		

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 DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064		1759065		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92301881001 Result	MS Spike Conc.	MSD Spike Conc.									
Nickel	mg/L	0.00088J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Selenium	mg/L	ND	.067	.067	0.066	0.065	98	97	75-125	2	20		
Silver	mg/L	ND	.067	.067	0.064	0.064	96	96	75-125	0	20		
Thallium	mg/L	ND	.067	.067	0.068	0.067	101	101	75-125	0	20		
Vanadium	mg/L	0.00031J	.067	.067	0.067	0.066	99	98	75-125	1	20		
Zinc	mg/L	0.0027J	.067	.067	0.069	0.069	99	99	75-125	0	20		

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 LF #4

Pace Project No.: 92301882

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McIntosh LF #4

Pace Project No.: 92301882

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92301882001	GWA-15	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301882002	DUP-1	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301882003	GWC-9	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301882001	GWA-15	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301882002	DUP-1	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301882003	GWC-9	EPA 7470	MERP/9626	EPA 7470	MERC/9249

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: Orange Power Environmental

Project #: _____

WO#: **92301882**



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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer: T1505

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 3.0

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:

Question	Yes	No	N/A	Comments/Discrepancy
Chain of Custody Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
-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"/>	7.
Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WST</u>				
All containers needing acid/base preservation have been checked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. HNC3 pH<2
All containers needing preservation are found to be in compliance with EPA recommendation?				HCl pH<2
HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H ₂ SO ₄ pH<2
Exceptions: VOA, Coliform, TOC, Oil and Grease,				NaOH pH>12
RO/8015 (water) DOC,LLHg	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NaOH/ZnOAc pH>9
Samples checked for dechlorination?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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: 6/17/16

Project Manager SRF Review: WST

Date: 6/20/16

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)

ANALYSIS REQUEST AND
 CHAIN OF CUSTODY RECORD

LAB
 USE
 ONLY

Work Order No. 92301532

Reviewed By: _____

Custody Seal ID: 20100615-03

Page 1 of 1

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 CCR + McIntosh #4 State GW

Sample Shipment Date: ⁸ 10/15/10
 Sample Received Date: ⁹ _____
 Sampled By: ¹⁰ Nyles Rogers

Signature: Sophanie Yu
 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)

Signature: Sophanie Yu
 Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

PRESERVATIVE ²⁰				ANALYSIS REQUESTED ²¹			
HNO3	HNO3	Ice	HNO3	HNO3	HNO3		
N	N	I	M	N			

Sample Type: ¹⁷ G
 Matrix: ¹⁸ GW
 No. of Containers: ¹⁹ 3

Sample Type Key: ²²	Matrix Key: ²³	Preservative Key: ²⁴
G-Graib O-Other C-Composite	O-Oil S-Solid SL-Sludge W-Water SW-Surface Water DW-Drinking Water	H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SS-Sodium Sulfide P-Phosphoric Acid U-Ultraviolet

LAB USE ONLY ¹³	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type ¹⁷	Matrix ¹⁸	No. of Containers ¹⁹	Metals app. III & IV EPA 6020 & EPA 7470				McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470				Cl, F, SO4 EPA 300 TDS SM2540C				Radium 226 & 228 Ga Tech				LAB USE ONLY ²⁵	Comments	
		Date	Time																							
	GVA-15	10/15/10	0943		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	001	
	DUP-1	10/15/10	—		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	002	
	GWC-9	10/15/10	1150		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	003	

LAB USE ONLY: Sample Receipt Information ²⁸

Relinquished by: ²⁶	Date/Time	Received by: ²⁷	Date/Time
<u>M. Decker</u>	<u>6/15/16 1655</u>	<u>Sophanie Yu</u>	<u>6/16/16 11:30</u>
<u>[Signature]</u>	<u>6/16/16 11:30</u>	<u>[Signature]</u>	<u>6/16/16 11:50</u>
<u>[Signature]</u>	<u>6/17/16 0930</u>	<u>[Signature]</u>	<u>6/17/16 0930</u>

June 22, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 92301881

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 LF #4

Pace Project No.: 92301881

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 LF #4

Pace Project No.: 92301881

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92301881001	GWC-1	Water	06/15/16 10:03	06/17/16 09:30
92301881002	GWC-12	Water	06/15/16 11:23	06/17/16 09:30
92301881003	GWC-11	Water	06/15/16 14:05	06/17/16 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92301881001	GWC-1	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301881002	GWC-12	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92301881003	GWC-11	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92301881001	GWC-1					
EPA 6020B	Barium	0.046	mg/L	0.010	06/20/16 15:26	
EPA 6020B	Beryllium	0.00012J	mg/L	0.0030	06/20/16 15:26	
EPA 6020B	Boron	0.017J	mg/L	0.10	06/20/16 15:26	
EPA 6020B	Calcium	3.0	mg/L	0.50	06/20/16 15:26	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	06/20/16 15:26	
EPA 6020B	Cobalt	0.0015J	mg/L	0.010	06/20/16 15:26	
EPA 6020B	Lithium	0.0013J	mg/L	0.050	06/20/16 15:26	
EPA 6020B	Nickel	0.00088J	mg/L	0.010	06/20/16 15:26	
EPA 6020B	Vanadium	0.00031J	mg/L	0.010	06/20/16 15:26	
EPA 6020B	Zinc	0.0027J	mg/L	0.010	06/20/16 15:26	
92301881002	GWC-12					
EPA 6020B	Barium	0.0095J	mg/L	0.010	06/20/16 15:37	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	06/20/16 15:37	
EPA 6020B	Boron	0.010J	mg/L	0.10	06/20/16 15:37	B
EPA 6020B	Calcium	0.69	mg/L	0.50	06/20/16 15:37	
EPA 6020B	Chromium	0.0016J	mg/L	0.010	06/20/16 15:37	
EPA 6020B	Cobalt	0.00051J	mg/L	0.010	06/20/16 15:37	
EPA 6020B	Lithium	0.0015J	mg/L	0.050	06/20/16 15:37	
EPA 6020B	Nickel	0.00068J	mg/L	0.010	06/20/16 15:37	
EPA 6020B	Vanadium	0.00040J	mg/L	0.010	06/20/16 15:37	
EPA 6020B	Zinc	0.0031J	mg/L	0.010	06/20/16 15:37	
92301881003	GWC-11					
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	06/20/16 15:41	
EPA 6020B	Barium	0.013	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Boron	0.011J	mg/L	0.10	06/20/16 15:41	B
EPA 6020B	Calcium	10.6	mg/L	0.50	06/20/16 15:41	
EPA 6020B	Chromium	0.0061J	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Cobalt	0.00011J	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Lead	0.00020J	mg/L	0.0050	06/20/16 15:41	
EPA 6020B	Lithium	0.0037J	mg/L	0.050	06/20/16 15:41	
EPA 6020B	Molybdenum	0.00076J	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Nickel	0.00085J	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Selenium	0.00052J	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Vanadium	0.0018J	mg/L	0.010	06/20/16 15:41	
EPA 6020B	Zinc	0.0028J	mg/L	0.010	06/20/16 15:41	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Sample: GWC-1		Lab ID: 92301881001		Collected: 06/15/16 10:03		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 15:26	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:26	7440-38-2		
Barium	0.046	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:26	7440-39-3		
Beryllium	0.00012J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:26	7440-41-7		
Boron	0.017J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:26	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:26	7440-43-9		
Calcium	3.0	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:26	7440-70-2		
Chromium	0.0011J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:26	7440-47-3		
Cobalt	0.0015J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:26	7440-48-4		
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:26	7440-50-8		
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:26	7439-92-1		
Lithium	0.0013J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:26	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:26	7439-98-7		
Nickel	0.00088J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:26	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:26	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:26	7440-22-4		
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:26	7440-28-0		
Vanadium	0.00031J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:26	7440-62-2		
Zinc	0.0027J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:26	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:45	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Sample: GWC-12		Lab ID: 92301881002		Collected: 06/15/16 11:23		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 15:37	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:37	7440-38-2		
Barium	0.0095J	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:37	7440-39-3		
Beryllium	0.00014J	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:37	7440-41-7		
Boron	0.010J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:37	7440-42-8	B	
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:37	7440-43-9		
Calcium	0.69	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:37	7440-70-2		
Chromium	0.0016J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:37	7440-47-3		
Cobalt	0.00051J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:37	7440-48-4		
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:37	7440-50-8		
Lead	ND	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:37	7439-92-1		
Lithium	0.0015J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:37	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:37	7439-98-7		
Nickel	0.00068J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:37	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:37	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:37	7440-22-4		
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:37	7440-28-0		
Vanadium	0.00040J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:37	7440-62-2		
Zinc	0.0031J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:37	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:48	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Sample: GWC-11		Lab ID: 92301881003		Collected: 06/15/16 14:05		Received: 06/17/16 09:30		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	06/18/16 14:00	06/20/16 15:41	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.000050	1	06/18/16 14:00	06/20/16 15:41	7440-38-2	
Barium	0.013	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/18/16 14:00	06/20/16 15:41	7440-41-7	
Boron	0.011J	mg/L	0.10	0.00057	1	06/18/16 14:00	06/20/16 15:41	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/18/16 14:00	06/20/16 15:41	7440-43-9	
Calcium	10.6	mg/L	0.50	0.10	1	06/18/16 14:00	06/20/16 15:41	7440-70-2	
Chromium	0.0061J	mg/L	0.010	0.00010	1	06/18/16 14:00	06/20/16 15:41	7440-47-3	
Cobalt	0.00011J	mg/L	0.010	0.000010	1	06/18/16 14:00	06/20/16 15:41	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/18/16 14:00	06/20/16 15:41	7440-50-8	
Lead	0.00020J	mg/L	0.0050	0.000080	1	06/18/16 14:00	06/20/16 15:41	7439-92-1	
Lithium	0.0037J	mg/L	0.050	0.000070	1	06/18/16 14:00	06/20/16 15:41	7439-93-2	
Molybdenum	0.00076J	mg/L	0.010	0.00011	1	06/18/16 14:00	06/20/16 15:41	7439-98-7	
Nickel	0.00085J	mg/L	0.010	0.00045	1	06/18/16 14:00	06/20/16 15:41	7440-02-0	
Selenium	0.00052J	mg/L	0.010	0.00032	1	06/18/16 14:00	06/20/16 15:41	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/18/16 14:00	06/20/16 15:41	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/18/16 14:00	06/20/16 15:41	7440-28-0	
Vanadium	0.0018J	mg/L	0.010	0.000070	1	06/18/16 14:00	06/20/16 15:41	7440-62-2	
Zinc	0.0028J	mg/L	0.010	0.0024	1	06/18/16 14:00	06/20/16 15:41	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/20/16 00:20	06/20/16 14:50	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

QC Batch: MERP/9626 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 92301881001, 92301881002, 92301881003

METHOD BLANK: 1759108 Matrix: Water
 Associated Lab Samples: 92301881001, 92301881002, 92301881003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/20/16 14:03	

LABORATORY CONTROL SAMPLE: 1759109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759110 1759111

Parameter	Units	92301875001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Mercury	mg/L	ND	.0025	.0025	0.0026	0.0026	104	104	75-125	0	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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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4
Pace Project No.: 92301881

QC Batch: MPRP/22083 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Associated Lab Samples: 92301881001, 92301881002, 92301881003

METHOD BLANK: 1759060 Matrix: Water
Associated Lab Samples: 92301881001, 92301881002, 92301881003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/20/16 14:20	
Arsenic	mg/L	ND	0.0050	0.000050	06/20/16 14:20	
Barium	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Beryllium	mg/L	ND	0.0030	0.000020	06/20/16 14:20	
Boron	mg/L	0.0015J	0.10	0.00057	06/20/16 14:20	
Cadmium	mg/L	ND	0.0010	0.000060	06/20/16 14:20	
Calcium	mg/L	ND	0.50	0.10	06/20/16 14:20	
Chromium	mg/L	ND	0.010	0.00010	06/20/16 14:20	
Cobalt	mg/L	ND	0.010	0.000010	06/20/16 14:20	
Copper	mg/L	ND	0.025	0.00012	06/20/16 14:20	
Lead	mg/L	ND	0.0050	0.000080	06/20/16 14:20	
Lithium	mg/L	ND	0.050	0.000070	06/20/16 14:20	
Molybdenum	mg/L	ND	0.010	0.00011	06/20/16 14:20	
Nickel	mg/L	ND	0.010	0.00045	06/20/16 14:20	
Selenium	mg/L	ND	0.010	0.00032	06/20/16 14:20	
Silver	mg/L	ND	0.010	0.000080	06/20/16 14:20	
Thallium	mg/L	ND	0.0010	0.000020	06/20/16 14:20	
Vanadium	mg/L	ND	0.010	0.000070	06/20/16 14:20	
Zinc	mg/L	ND	0.010	0.0024	06/20/16 14:20	

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.067	0.064	97	80-120	
Arsenic	mg/L	.067	0.065	98	80-120	
Barium	mg/L	.067	0.066	99	80-120	
Beryllium	mg/L	.067	0.068	102	80-120	
Boron	mg/L	.067	0.068J	103	80-120	
Cadmium	mg/L	.067	0.066	100	80-120	
Calcium	mg/L	.83	0.84	101	80-120	
Chromium	mg/L	.067	0.066	99	80-120	
Cobalt	mg/L	.067	0.067	100	80-120	
Copper	mg/L	.067	0.067	101	80-120	
Lead	mg/L	.067	0.067	100	80-120	
Lithium	mg/L	.067	0.067	101	80-120	
Molybdenum	mg/L	.067	0.064	96	80-120	
Nickel	mg/L	.067	0.065	98	80-120	
Selenium	mg/L	.067	0.063	94	80-120	
Silver	mg/L	.067	0.065	97	80-120	
Thallium	mg/L	.067	0.068	102	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

LABORATORY CONTROL SAMPLE: 1759061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.067	0.066	98	80-120	
Zinc	mg/L	.067	0.065	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759062 1759063

Parameter	Units	92301875001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.067	.067	0.064	0.065	96	97	75-125	2	20	
Arsenic	mg/L	ND	.067	.067	0.065	0.066	98	99	75-125	2	20	
Barium	mg/L	0.024	.067	.067	0.091	0.091	100	101	75-125	1	20	
Beryllium	mg/L	0.00011J	.067	.067	0.065	0.065	97	97	75-125	0	20	
Boron	mg/L	0.0085J	.067	.067	0.072J	0.071J	95	94	75-125	1	20	
Cadmium	mg/L	ND	.067	.067	0.067	0.068	101	101	75-125	1	20	
Calcium	mg/L	0.42J	.83	.83	1.3	1.2	103	98	75-125	3	20	
Chromium	mg/L	0.00072J	.067	.067	0.066	0.067	98	100	75-125	2	20	
Cobalt	mg/L	0.00063J	.067	.067	0.067	0.068	99	101	75-125	2	20	
Copper	mg/L	ND	.067	.067	0.068	0.069	101	103	75-125	2	20	
Lead	mg/L	ND	.067	.067	0.067	0.067	100	101	75-125	1	20	
Lithium	mg/L	0.00080J	.067	.067	0.066	0.066	98	98	75-125	0	20	
Molybdenum	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20	
Nickel	mg/L	ND	.067	.067	0.065	0.067	97	99	75-125	2	20	
Selenium	mg/L	ND	.067	.067	0.065	0.065	98	98	75-125	0	20	
Silver	mg/L	ND	.067	.067	0.063	0.065	95	97	75-125	2	20	
Thallium	mg/L	ND	.067	.067	0.067	0.068	101	102	75-125	2	20	
Vanadium	mg/L	0.00015J	.067	.067	0.065	0.066	98	99	75-125	2	20	
Zinc	mg/L	0.0032J	.067	.067	0.069	0.069	98	99	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064 1759065

Parameter	Units	92301881001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.067	.067	0.065	0.063	97	95	75-125	2	20	
Arsenic	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20	
Barium	mg/L	0.046	.067	.067	0.11	0.11	100	99	75-125	1	20	
Beryllium	mg/L	0.00012J	.067	.067	0.069	0.068	104	102	75-125	1	20	
Boron	mg/L	0.017J	.067	.067	0.083J	0.085J	99	102	75-125	2	20	
Cadmium	mg/L	ND	.067	.067	0.067	0.067	100	100	75-125	0	20	
Calcium	mg/L	3.0	.83	.83	3.9	3.9	105	102	75-125	1	20	
Chromium	mg/L	0.0011J	.067	.067	0.068	0.067	100	99	75-125	1	20	
Cobalt	mg/L	0.0015J	.067	.067	0.068	0.068	100	100	75-125	1	20	
Copper	mg/L	ND	.067	.067	0.069	0.069	104	103	75-125	1	20	
Lead	mg/L	ND	.067	.067	0.067	0.066	100	99	75-125	1	20	
Lithium	mg/L	0.0013J	.067	.067	0.069	0.069	101	101	75-125	0	20	
Molybdenum	mg/L	ND	.067	.067	0.065	0.063	98	95	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759064		1759065		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92301881001 Result	MS Spike Conc.	MSD Spike Conc.								
Nickel	mg/L	0.00088J	.067	.067	0.067	0.066	99	98	75-125	1	20	
Selenium	mg/L	ND	.067	.067	0.066	0.065	98	97	75-125	2	20	
Silver	mg/L	ND	.067	.067	0.064	0.064	96	96	75-125	0	20	
Thallium	mg/L	ND	.067	.067	0.068	0.067	101	101	75-125	0	20	
Vanadium	mg/L	0.00031J	.067	.067	0.067	0.066	99	98	75-125	1	20	
Zinc	mg/L	0.0027J	.067	.067	0.069	0.069	99	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McIntosh LF #4

Pace Project No.: 92301881

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92301881001	GWC-1	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301881002	GWC-12	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301881003	GWC-11	EPA 3010A	MPRP/22083	EPA 6020B	ICPM/1318
92301881001	GWC-1	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301881002	GWC-12	EPA 7470	MERP/9626	EPA 7470	MERC/9249
92301881003	GWC-11	EPA 7470	MERP/9626	EPA 7470	MERC/9249

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: origa Power Environmental Project #

WO#: **92301881**



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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer: T1505 Type of Ice: Wet Blue None

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 3.0

Date/Initials Person Examining Contents: 6-17-16

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 type="checkbox"/> Yes <input checked="" 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 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>WST</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. HNC3 pH<2
All containers needing preservation are found to be in compliance with EPA recommendation?	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,	NaOH pH>12
PRO/8015 (water) DOC,LLHg	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: 6/17/16

Project Manager SRF Review: KGA Date: 6/18/16

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)

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. 9230153
 Reviewed By:
 Page 1 of 1

Custody seal ID: 20160615-02

Sample Shipment Date: 6/15/16
 Sample Received Date: 6/15/16

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

Sampled By: Tracy Wardell
 # 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 ¹⁷	Matrix ¹⁸	No. of Containers ¹⁹	ANALYSIS REQUESTED ²¹				PRESERVATIVE ²⁰			Sample Type Key: 22 G-Grab O-Other C-Composite	
		Date	Time					HNO3 N	HNO3 N	Ice I	HNO3 N	HNO3 N	HNO3 N	Matrix Key: 23 S-Solid SL-Sludge W-Wrap SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water		Preservative Key: 24 H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Borate P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Ultrasonicated
	GWC-1	6/15/16	10:03		G	GW	3	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C	✓	✓	✓	✓	✓	✓	RA-SW-846 9315+9320 Ga Tech Redum 226 & 228	001
	GWC-12	6/15/16	11:23		G	GW	3		✓	✓	✓					002
	GWC-11	6/15/16	14:05		G	GW	3		✓	✓	✓					003

LAB USE ONLY: Sample Receipt Information ²⁸			
Relinquished by:	<i>[Signature]</i>	Date/Time	6/15/16/1655
Received by:	<i>[Signature]</i>	Date/Time	6/16/16 @ 11:30
Relinquished by:	<i>[Signature]</i>	Date/Time	6-16-16 @ 11:00
Received by:	<i>[Signature]</i>	Date/Time	6-17-16 930



Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 19, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 30186875

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 7/19/16 to reflect the inclusion of Ra-226 results that were not included on initial 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 LF #4
Pace Project No.: 30186875

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 LF #4
Pace Project No.: 30186875

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30186875001	GWA-14	Water	06/14/16 13:08	06/17/16 09:50
30186875002	GWA-2	Water	06/14/16 10:45	06/17/16 09:50
30186875003	GWA-3	Water	06/14/16 12:48	06/17/16 09:50

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
Pace Project No.: 30186875

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30186875001	GWA-14	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186875002	GWA-2	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186875003	GWA-3	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186875

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.244 ± 0.123 (0.167) C:94% T:NA	pCi/L	07/18/16 06:31	13982-63-3	
Radium-228		EPA 9320	0.145 ± 0.308 (0.656) C:73% T:88%	pCi/L	07/15/16 00:15	15262-20-1	
Total Radium		Total Radium Calculation	0.389 ± 0.431 (0.823)	pCi/L	07/18/16 13:31	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.443 ± 0.167 (0.196) C:94% T:NA	pCi/L	07/18/16 06:31	13982-63-3	
Radium-228		EPA 9320	0.434 ± 0.336 (0.652) C:77% T:88%	pCi/L	07/15/16 00:15	15262-20-1	
Total Radium		Total Radium Calculation	0.877 ± 0.503 (0.848)	pCi/L	07/18/16 13:31	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.682 ± 0.209 (0.213) C:95% T:NA	pCi/L	07/18/16 06:31	13982-63-3	
Radium-228		EPA 9320	0.748 ± 0.340 (0.565) C:82% T:86%	pCi/L	07/15/16 00:16	15262-20-1	
Total Radium		Total Radium Calculation	1.43 ± 0.549 (0.778)	pCi/L	07/18/16 13:31	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186875

QC Batch: 225695 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30186875001, 30186875002, 30186875003

METHOD BLANK: 1105636 Matrix: Water
 Associated Lab Samples: 30186875001, 30186875002, 30186875003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.650 ± 0.476 (0.938) C:76% T:74%	pCi/L	07/14/16 20:11	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
Pace Project No.: 30186875

QC Batch: 225788 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 30186875001, 30186875002, 30186875003

METHOD BLANK: 1106277 Matrix: Water
Associated Lab Samples: 30186875001, 30186875002, 30186875003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.148 ± 0.104 (0.170) C:93% T:NA	pCi/L	07/18/16 06:29	

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QUALIFIERS

Project: Plant McIntosh LF #4
Pace Project No.: 30186875

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 ID: 20160614-01

WO#: 30186875



SA18037E

Sample Shipment Date:⁸ 06/14/2016
 Sample Received Date:⁹ X 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 CCR + McIntosh #4 State GW

Sampled By: Tracy Wardell, Myles Rogers
 # of Business Days (Rush) _____
 (Must be cleared through Env. Lab. Prior to shipment)

Signature
 Stephanie Lunn

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

LAB USE ONLY	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	HNO3	Ice	HNO3	ANOS	HNO3	O-Other	
	GNA-14	6/14/16	13:08		G	GW	3	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C							
	GNA-2	6/14/16	10:45		G	GW	3								
	GNA-3	6/14/16	12:48		G	GW	3								

Relinquished by:²⁶ MULL GIBB
 Date/Time: 6/14/16 16:45
 Received by:²⁷
 Date/Time: 6/16/16 11:30
 Relinquished by:
 Date/Time: 6-16-16 11:50
 Received by: Bobley Gore Pace
 Date/Time: 6-17-16 10:50

Sample Condition Upon Receipt Pittsburgh

30186875



Client Name: Georgia Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7833 7887 7931 09R6-17-16

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used 6 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp _____ °C Correction Factor: -0.1 °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 09R 6-17-16

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:	X			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
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:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13.
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>09R</u> Date/time of preservation
				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



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: RMK
 Date: 7/15/2016
 Worklist: 30290
 Matrix: DW

Method Blank Assessment

MB Sample ID: 1106277
 MB Concentration: 0.148
 MB Counting Uncertainty: 0.101
 MB MDC: 0.170
 MB Numerical Performance Indicator: 2.87
 MB Status vs Numerical Indicator: N/A
 MB Status vs. MDC: **Pass**

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
LCS30290	7/18/2016
LCS30290	16-001
Count Date:	47.784
Spike I.D.:	0.10
Spike Concentration (pCi/L):	0.500
Volume Used (mL):	9.551
Aliquot Volume (L, g, F):	0.449
Target Conc. (pCi/L, g, F):	7.199
Uncertainty (Calculated):	0.545
Result (pCi/L, g, F):	-5.53
LCSD Counting Uncertainty (pCi/L, g, F):	75.37%
Numerical Performance Indicator:	N/A
Percent Recovery:	80.09%
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass

Duplicate Sample Assessment

Sample I.D.: LCS30290
 Duplicate Sample I.D.: LCS30290
 Sample Result (pCi/L, g, F): 7.199
 Duplicate Result (pCi/L, g, F): 0.545
 Sample Result Counting Uncertainty (pCi/L, g, F): 7.650
 Duplicate Counting Uncertainty (pCi/L, g, F): 0.580
 Are sample and/or duplicate results below MDC? NO
 Duplicate Numerical Performance Indicator: -1.111
 Duplicate RPD: 6.07%
 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):
 MS Alliquot (L, g, F):
 MSD Alliquot (L, g, F):
 MS Target Conc. (pCi/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:
 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:
 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: 7/18/16

Quality Control Sample Performance Assessment



www.paceanalytical.com

Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30277
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID: 1105836
MB concentration: 0.650
MB Counting Uncertainty: 0.462
MB MDC: 0.938
MB Numerical Performance Indicator: 2.76
MB Status vs Numerical Indicator: N/A
MB Status vs MDC: Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
LCSD30277	7/14/2016
Count Date:	7/14/2016
Spike I.D.:	15-018
Spike Concentration (pCi/mL):	23.362
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	5.830
Uncertainty (Calculated):	0.231
Result (pCi/L, g, F):	5.646
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.772
Numerical Performance Indicator:	-0.45
Percent Recovery:	96.85%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment

Sample I.D.:	LCSD30277
Duplicate Sample I.D.:	LCSD30277
Sample Result (pCi/L, g, F):	5.646
Sample Duplicate Result (pCi/L, g, F):	0.772
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	5.493
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.666
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.295
Duplicate RPD:	2.75%
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:
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:
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: 7/18/16



July 25, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 30186882

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 7/21/16 to reflect the inclusion of Ra-226 results that were not included on initial 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 LF #4
Pace Project No.: 30186882

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4
Pace Project No.: 30186882

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30186882001	GWA-13	Water	06/14/16 11:14	06/17/16 09:50
30186882002	GWA-4	Water	06/14/16 11:20	06/17/16 09:50
30186882003	GWA-5	Water	06/14/16 13:40	06/17/16 09:50

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
Pace Project No.: 30186882

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30186882001	GWA-13	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186882002	GWA-4	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186882003	GWA-5	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186882

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-13 Lab ID: 30186882001 Collected: 06/14/16 11:14 Received: 06/17/16 09:50 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.263 ± 0.139 (0.209) C:93% T:NA	pCi/L	07/18/16 09:13	13982-63-3	
Radium-228		EPA 9320	0.546 ± 0.379 (0.722) C:74% T:88%	pCi/L	07/15/16 00:16	15262-20-1	
Total Radium		Total Radium Calculation	0.809 ± 0.518 (0.931)	pCi/L	07/18/16 13:18	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-4 Lab ID: 30186882002 Collected: 06/14/16 11:20 Received: 06/17/16 09:50 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.192 ± 0.115 (0.170) C:92% T:NA	pCi/L	07/18/16 09:13	13982-63-3	
Radium-228		EPA 9320	0.487 ± 0.323 (0.609) C:78% T:92%	pCi/L	07/15/16 00:17	15262-20-1	
Total Radium		Total Radium Calculation	0.679 ± 0.438 (0.779)	pCi/L	07/18/16 13:18	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-5 Lab ID: 30186882003 Collected: 06/14/16 13:40 Received: 06/17/16 09:50 Matrix: Water PWS: Site ID: Sample Type:							
Radium-226		EPA 9315	0.261 ± 0.143 (0.217) C:90% T:NA	pCi/L	07/18/16 09:13	13982-63-3	
Radium-228		EPA 9320	0.446 ± 0.315 (0.596) C:72% T:92%	pCi/L	07/15/16 00:17	15262-20-1	
Total Radium		Total Radium Calculation	0.707 ± 0.458 (0.813)	pCi/L	07/18/16 13:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186882

QC Batch: 225789 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30186882001, 30186882002, 30186882003

METHOD BLANK: 1106278 Matrix: Water
 Associated Lab Samples: 30186882001, 30186882002, 30186882003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.0541 (0.148) C:95% T:NA	pCi/L	07/18/16 09:12	

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 LF #4
 Pace Project No.: 30186882

QC Batch: 225696 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30186882001, 30186882002, 30186882003

METHOD BLANK: 1105637 Matrix: Water
 Associated Lab Samples: 30186882001, 30186882002, 30186882003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.297 ± 0.401 (0.831) C:69% T:70%	pCi/L	07/15/16 00:16	

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.

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QUALIFIERS

Project: Plant McIntosh LF #4
Pace Project No.: 30186882

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.

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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

WO#: 30186882
 Custody seal ID: 20100614-02

Sample Shipment Date: 06/14/16
 Sample Received Date: _____

Sampled By: Myles Rogers, Amanda Stormer
 (Must be cleared through Env. Lab. Prior to shipment)

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

PRESERVATIVE ²⁰		ANALYSIS REQUESTED ²¹	
HNO3 N	HNO3 N	Ice I	MTOS <u>HW03</u> N
Metals app. III & IV EPA 6020 & EPA 7470		McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470	
Metals app. III & IV EPA 6020 & EPA 7470		Cl, F, SO4 EPA 300 TDS SM2540C	
No. of Containers		Matrix	
17	18	19	20
Sample Type	G G G	3 3 3	Matrix

LAB USE ONLY	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶
		Date	Time	
	GWA-13	6/14/16	11:14	
	GWA-4	6/14/16	11:20	
	GWA-5	6/14/16	13:40	

LAB USE ONLY				

LAB USE ONLY - Sample Receipt Information	
Relinquished by: <u>Joju Abraham</u>	Date/Time: <u>6-14-16 16:55</u>
Received by: <u>Myles Rogers</u>	Date/Time: <u>6/16/16 11:30</u>
Relinquished by: <u>Joju Abraham</u>	Date/Time: <u>6-16-16 11:50</u>
Received by: <u>Myles Rogers</u>	Date/Time: <u>6-17-16 09:50</u>

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Bower Project # 30186882

Courier: Fed Ex UPS USPS Client Commercial Pace Other
 Tracking #: 7833 7885 2607 7833 7879 6419

Custody Seal on Cooler/Box Present: yes no Seals Intact: yes no

Thermometer Used 6 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 2.2 °C Correction Factor: -0.1 °C Final Temp: 2.1 °C
 Temp should be above freezing to 6°C 0.7 0.6

Date and Initials of person examining contents: APR 6-17-16

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:	X			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
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:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13. <u>PH22</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>APR</u> Date/time of preservation
				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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30278
Matrix: DW



Method Blank Assessment

MB Sample ID: 1105637
MB concentration: 0.297
M/B Counting Uncertainty: 0.398
MB MDC: 0.831
MB Numerical Performance Indicator: 1.46
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment		LCS (Y or N)?
Count Date:	7/15/2016	Y
Spike I.D.:	15-018	LCS030278
Spike Concentration (pCi/mL):	23.361	7/15/2016
Volume Used (mL):	0.20	15-018
Aliquot Volume (L, g, F):	0.816	23.361
Target Conc. (pCi/L, g, F):	5.726	0.20
Uncertainty (Calculated):	0.229	0.816
Result (pCi/L, g, F):	5.866	5.726
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.656	0.230
Numerical Performance Indicator:	0.45	5.468
Percent Recovery:	102.79%	0.654
Status vs Numerical Indicator:	N/A	-0.82
Status vs Recovery:	Pass	94.94%

Duplicate Sample Assessment

Sample I.D.: LCS030278
Duplicate Sample I.D.: LCS030278
Sample Result (pCi/L, g, F): 5.866
Sample Result Counting Uncertainty (pCi/L, g, F): 0.656
Sample Duplicate Result (pCi/L, g, F): 5.468
Sample Duplicate Counting Uncertainty (pCi/L, g, F): 0.654
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: 0.865
Duplicate RPD: 7.37%
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 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:
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:
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 Indicator:
MS/MSD Duplicate Status vs RPD:
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: JLW 7/18/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30291
Matrix: DW



Method Blank Assessment

MB Sample ID: 1106278
MB concentration: 0.000
MB Counting Uncertainty: 0.054
MB MDC: 0.143
MB Numerical Performance Indicator: 0.00
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count Date:	LCSD (Y or N)?	Y
7/18/2016	LCS30291	LCS30291
16-001	16-001	16-001
47.784	47.784	47.784
0.10	0.10	0.10
0.501	0.501	0.500
9.545	9.545	9.555
0.449	0.449	0.449
7.656	7.656	8.177
-5.05	-5.05	-3.67
80.63%	80.63%	85.57%
N/A	N/A	N/A
Pass	Pass	Pass

Duplicate Sample Assessment

Sample I.D.:	Duplicate Sample I.D.:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Are sample and/or duplicate results below MDC?	Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:
LCS30291	LCS30291	7.696	0.560	NO	-1.166	6.06%	N/A
Pass	Pass	Pass	Pass	Pass	Pass	Pass	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 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:
MSD Numerical Performance Indicator:
MS Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
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: 7/18/16



Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 19, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 30186874

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 7/19/16 to reflect the inclusion of Ra-226 results that were not included on initial 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 LF #4
Pace Project No.: 30186874

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4
Pace Project No.: 30186874

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30186874001	GWA-16	Water	06/15/16 10:20	06/17/16 09:50
30186874002	GWC-17	Water	06/15/16 13:00	06/17/16 09:50
30186874003	FB-1	Water	06/15/16 14:30	06/17/16 09:50
30186874004	FERB-1	Water	06/15/16 14:40	06/17/16 09:50

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
 Pace Project No.: 30186874

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30186874001	GWA-16	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186874002	GWC-17	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186874003	FB-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186874004	FERB-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186874

Sample: GWA-16		Lab ID: 30186874001	Collected: 06/15/16 10:20	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.442 ± 0.170	(0.216)	pCi/L	07/18/16 06:31	13982-63-3	
		C:94% T:NA					
Radium-228	EPA 9320	0.328 ± 0.317	(0.634)	pCi/L	07/15/16 00:15	15262-20-1	
		C:76% T:89%					
Total Radium	Total Radium Calculation	0.770 ± 0.487	(0.850)	pCi/L	07/18/16 13:31	7440-14-4	

Sample: GWC-17		Lab ID: 30186874002	Collected: 06/15/16 13:00	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.201 ± 0.113	(0.164)	pCi/L	07/18/16 06:31	13982-63-3	
		C:93% T:NA					
Radium-228	EPA 9320	0.331 ± 0.302	(0.600)	pCi/L	07/15/16 00:15	15262-20-1	
		C:82% T:90%					
Total Radium	Total Radium Calculation	0.532 ± 0.415	(0.764)	pCi/L	07/18/16 13:31	7440-14-4	

Sample: FB-1		Lab ID: 30186874003	Collected: 06/15/16 14:30	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0860 ± 0.0878	(0.170)	pCi/L	07/18/16 06:31	13982-63-3	
		C:95% T:NA					
Radium-228	EPA 9320	0.483 ± 0.460	(0.917)	pCi/L	07/15/16 00:15	15262-20-1	
		C:50% T:87%					
Total Radium	Total Radium Calculation	0.569 ± 0.548	(1.09)	pCi/L	07/18/16 13:31	7440-14-4	

Sample: FERB-1		Lab ID: 30186874004	Collected: 06/15/16 14:40	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0454 ± 0.107	(0.244)	pCi/L	07/18/16 06:31	13982-63-3	
		C:95% T:NA					
Radium-228	EPA 9320	0.180 ± 0.324	(0.684)	pCi/L	07/15/16 00:15	15262-20-1	
		C:78% T:91%					
Total Radium	Total Radium Calculation	0.225 ± 0.431	(0.928)	pCi/L	07/18/16 13:31	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186874

QC Batch: 225695 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30186874001, 30186874002, 30186874003, 30186874004

METHOD BLANK: 1105636 Matrix: Water
 Associated Lab Samples: 30186874001, 30186874002, 30186874003, 30186874004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.650 ± 0.476 (0.938) C:76% T:74%	pCi/L	07/14/16 20:11	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186874

QC Batch: 225788 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30186874001, 30186874002, 30186874003, 30186874004

METHOD BLANK: 1106277 Matrix: Water
 Associated Lab Samples: 30186874001, 30186874002, 30186874003, 30186874004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.148 ± 0.104 (0.170) C:93% T:NA	pCi/L	07/18/16 06:29	

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 LF #4
Pace Project No.: 30186874

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.

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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

WO#: 30186874

custody seal ID: 20160615-01



Sample Shipment Date: 6/15/16

Sample Received Date: 6/15/16

Sampled By: Amanda Stamer

Signature: *Amanda Stamer*

Company: Southern Company Services

Report To: Joju Abraham

Address: 241 Ralph McGill Blvd SE B10185

Atlanta, GA 30308

Phone/Fax: 404-506-7239

Contact: Joju Abraham

Project Location: Plant McIntosh LF #4

Account Number:

Special Instructions: CCR + McIntosh #4 State GW

of Business Days (Rush)

(Must be cleared through Env. Lab. Prior to shipment)

PRESERVATIVE

HNO3 HNO3 Ice HNO3 HNO3

N N I N N

Matrix Key: 23

Sample Type Key: 22

G-Sub O-Other C-Composite

O-Oil S-Solid SL-Sludge W-Wipe

SW-Surface Water GW-Ground Water

WW-Waste Water DW-Drinking Water

Preservative Key: 24

H-Hydrobromic Acid N-Nitric Acid

S-Sulfuric Acid SH-Sodium Hydroxide

SS-Sodium Sulfide P-Phosphoric Acid

ST-Sodium Thiosulfite L-Unpreserved

LAB USE ONLY

COMMENTS

RA-SW-846 9315+9320

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

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✓

✓

✓

LAB USE ONLY: Sample Receipt Information

Relinquished by: 6/15/16

Received by: 6/15/16 @ 11:30

Relinquished by: 6/16/16 @ 11:50

Received by: 6/16/16 @ 11:50

Relinquished by: 6/16/16 @ 11:50

Received by: 6/16/16 @ 11:50

Relinquished by: 6/16/16 @ 11:50

Received by: 6/16/16 @ 11:50

Relinquished by: 6/16/16 @ 11:50

Received by: 6/16/16 @ 11:50

Relinquished by: 6/16/16 @ 11:50

Received by: 6/16/16 @ 11:50

Relinquished by: 6/16/16 @ 11:50

Received by: 6/16/16 @ 11:50

+ DI = Distilled Water

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Bover

Project # 30186874

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7833 7886 5055 Q97R 6-17-16

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used 6 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 1.2 °C Correction Factor: -0.1 °C Final Temp: 1.1 °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: Q97R 6-17-16

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:	X			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
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:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13.
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>Q97R</u> Date/time of preservation
				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



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30290
Matrix: DW

Method Blank Assessment

MB Sample ID: 1106277
MB concentration: 0.148
MB Counting Uncertainty: 0.101
MB MDC: 0.170
MB Numerical Performance Indicator: 2.87
MB Status vs Numerical Indicator: **N/A**
MB Status vs. MDC: **Pass**

Laboratory Control Sample Assessment

Count Date:	Spoke I.D.:	Spoke Concentration (pCi/mL):	Volume Used (mL):	Aliquot Volume (L, g, F):	Target Conc. (pCi/L, g, F):	Uncertainty (Calculated):	Result (pCi/L, g, F):	LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Percent Recovery:	Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
7/18/2016	16-001	47.784	0.10	0.500	9.551	0.449	7.650	0.580	75.37%	N/A	Pass
7/18/2016	16-001	47.784	0.10	0.500	9.551	0.449	7.650	0.580	80.09%	N/A	Pass

Duplicate Sample Assessment

Sample I.D.:	Duplicate Sample I.D.:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Are sample and/or duplicate results below MDC?	Duplicate Numerical Performance Indicator:	Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:
LCS30290	LCS30290	0.545	0.545	NO	-1.111	6.07%	N/A	Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature and date: 7/18/16

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:
MSD 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.:
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:

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30277
Matrix: DW



Method Blank Assessment	
MB Sample ID	1105636
MB Concentration:	0.650
MB Counting Uncertainty:	0.462
MB MDC:	0.938
MB Numerical Performance Indicator:	2.76
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS# (Y or N)?	Y
Count Date:	7/14/2016	LCS30277	
Spike I.D.:	15-018	7/14/2016	
Spike Concentration (pCi/mL):	23.362	15-018	
Volume Used (mL):	0.20	23.362	
Aliquot Volume (L, g, F):	0.801	0.20	
Target Conc. (pCi/L, g, F):	5.830	0.807	
Uncertainty (Calculated):	0.233	5.787	
Result (pCi/L, g, F):	5.646	0.231	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.772	5.493	
Numerical Performance Indicator:	-0.45	0.666	
Percent Recovery:	96.65%	-0.82	
Status vs Numerical Indicator:	N/A	94.92%	
Status vs Recovery:	Pass	N/A	
		Pass	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS30277	
Duplicate Sample I.D.:	LC-SD30277	
Sample Result Counting Uncertainty (pCi/L, g, F):	5.646	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.772	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	5.493	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	0.295	
Duplicate RPD:	2.75%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

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):	
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:	
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.:	
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 Status vs Numerical Indicator:	
MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs RPD:	

Handwritten signature: JLW



Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 19, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh #4
Pace Project No.: 30186872

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 7/19/16 to reflect the inclusion of Ra-226 results that were not included on initial 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 #4
Pace Project No.: 30186872

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

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SAMPLE SUMMARY

Project: Plant McIntosh #4
Pace Project No.: 30186872

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30186872001	GWA-15	Water	06/15/16 09:43	06/17/16 09:50
30186872002	DUP-1	Water	06/15/16 00:01	06/17/16 09:50
30186872003	GWC-9	Water	06/15/16 11:56	06/17/16 09:50

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh #4
Pace Project No.: 30186872

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30186872001	GWA-15	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186872002	DUP-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186872003	GWC-9	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh #4
 Pace Project No.: 30186872

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWA-15		Lab ID: 30186872001	Collected: 06/15/16 09:43	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	0.337 ± 0.152 (0.217)	pCi/L	07/18/16 06:30	13982-63-3		
Radium-228	EPA 9320	0.390 ± 0.320 (0.625) C:95% T:NA	pCi/L	07/15/16 00:14	15262-20-1		
Total Radium	Total Radium Calculation	0.727 ± 0.472 (0.842)	pCi/L	07/18/16 13:31	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DUP-1		Lab ID: 30186872002	Collected: 06/15/16 00:01	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	0.320 ± 0.148 (0.204)	pCi/L	07/18/16 06:30	13982-63-3		
Radium-228	EPA 9320	0.342 ± 0.430 (0.886) C:96% T:NA	pCi/L	07/15/16 00:14	15262-20-1		
Total Radium	Total Radium Calculation	0.662 ± 0.578 (1.09) C:58% T:92%	pCi/L	07/18/16 13:31	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-9		Lab ID: 30186872003	Collected: 06/15/16 11:56	Received: 06/17/16 09:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	0.471 ± 0.176 (0.197)	pCi/L	07/18/16 06:30	13982-63-3		
Radium-228	EPA 9320	0.856 ± 0.438 (0.767) C:91% T:NA	pCi/L	07/15/16 00:14	15262-20-1		
Total Radium	Total Radium Calculation	1.33 ± 0.614 (0.964) C:73% T:84%	pCi/L	07/18/16 13:31	7440-14-4		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh #4
 Pace Project No.: 30186872

QC Batch: 225695 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30186872001, 30186872002, 30186872003

METHOD BLANK: 1105636 Matrix: Water
 Associated Lab Samples: 30186872001, 30186872002, 30186872003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.650 ± 0.476 (0.938) C:76% T:74%	pCi/L	07/14/16 20:11	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh #4
 Pace Project No.: 30186872

QC Batch: 225788 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30186872001, 30186872002, 30186872003

METHOD BLANK: 1106277 Matrix: Water
 Associated Lab Samples: 30186872001, 30186872002, 30186872003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.148 ± 0.104 (0.170) C:93% T:NA	pCi/L	07/18/16 06:29	

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 #4
Pace Project No.: 30186872

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 ID: 20160615-03

LA US ONI
 WO#: 30186872



Sample Shipment Date:⁸ 6/15/16
 Sample Received Date:⁹
 ¹² Standard Turnaround Time
 # of Business Days (Rush)
 (Must be cleared through Env. Lab. Prior to shipment)

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

Sampled By:¹⁰ Nyles Rogers

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

LAB USE ONLY ¹³ LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type	Matrix	No. of Containers ¹⁹	ANALYSIS REQUESTED ²¹			PRESERVATIVE ²⁰			Sample Type Key: ²²	
		Date	Time					HNO3	HNO3	Ice	HNO3	HNO3	N		N
	GWA-15	6/15/16	0943		G	GW	3	Metals app. III & IV EPA 6020 & EPA 7470	McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470	CL, F, SO4 EPA 300 TDS SM2540C	RA-S-M-846-936-1930 Ca Fe	✓	✓	✓	001
	DUP-1	6/15/16	---		G	GW	3					✓	✓	✓	002
	GWC-9	6/15/16	1156		G	GW	3					✓	✓	✓	003

LAB USE ONLY - Sample Receipt Information ²⁸	
Relinquished by: ²⁶ <i>M. P. ...</i>	Date/Time: 6/15/16 1655
Received by: ²⁷ <i>Sophanie Yuw</i>	Date/Time: 6/16/16 1130
Relinquished by:	Date/Time: 6-16-16 9:15d
Received by: <i>W. Nyles Rogers</i>	Date/Time: 6-17-16/0850

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power Project # 30186872

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7833 7882 5316 0018 6-17-16
 Custody Seal on Cooler/Box Present: yes no Seals Intact: yes no

Thermometer Used 6 Type of Ice: Wet Blue None
 Cooler Temperature Observed Temp 1.2 °C Correction Factor: -0.1 °C Final Temp: 1.1 °C
 Temp should be above freezing to 6°C

Date and initials of person examining contents: 097R 6-17-16

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:	X			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
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:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13. <u>PH22</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>097R</u> Date/time of preservation _____ 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



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30290
Matrix: DW

Method Blank Assessment

MB Sample ID: 1108277
MB concentration: 0.148
M/B Counting Uncertainty: 0.101
MB MDC: 0.170
MB Numerical Performance Indicator: 2.87
MB Status vs Numerical Indicator: N/A
MB Status vs MDC: Pass

Laboratory Control Sample Assessment

Count Date:	LCSID (Y or N)?
7/18/2016	Y
16-001	LCS030290
47.784	16-001
0.10	47.784
0.500	0.10
9.551	0.500
0.449	9.551
7.650	0.449
0.580	7.650
-5.08	0.580
80.09%	-5.08
N/A	80.09%
Pass	N/A
Pass	Pass

Count Date: 7/18/2016
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): 9.551
Uncertainty (Calculated): 0.449
Result (pCi/L, g, F): 7.199
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.545
Numerical Performance Indicator: -6.53
Percent Recovery: 75.37%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: LCS030290
Duplicate Sample I.D.: LCS030290
Sample Result (pCi/L, g, F): 7.199
Sample Duplicate Result (pCi/L, g, F): 0.545
Sample Duplicate Result (pCi/L, g, F): 7.650
Sample Duplicate Result (pCi/L, g, F): 0.580
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: -1.111
Duplicate RPD: 6.07%
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:
MSD 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:
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:

7/18/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30277
Matrix: DW



Method Blank Assessment	
MB Sample ID	1105636
MB concentration:	0.650
M/B Counting Uncertainty:	0.462
MB MDC:	0.938
MB Numerical Performance Indicator:	2.78
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS30277	Y
Count Date:	7/14/2016
Sample I.D.:	15-018
Spike Concentration (pCi/mL):	23.362
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	5.830
Uncertainty (Calculated):	0.233
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	5.646
Result (pCi/L, g, F):	0.772
Numerical Performance Indicator:	-0.45
Percent Recovery:	96.85%
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS30277
Duplicate Sample I.D.:	LCS30277
Sample Result (pCi/L, g, F):	5.646
Sample Duplicate Result (pCi/L, g, F):	0.772
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	5.493
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.666
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.295
Duplicate RPD:	2.75%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

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):	
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 Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate 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 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:	

JLW
7/18/16



Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 19, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh LF #4
Pace Project No.: 30186873

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 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 7/19/16 to reflect the inclusion of Ra-226 results that were not included on initial 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 LF #4
Pace Project No.: 30186873

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4
Pace Project No.: 30186873

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30186873001	GWC-1	Water	06/15/16 10:03	06/17/16 09:50
30186873002	GWC-12	Water	06/15/16 11:23	06/17/16 09:50
30186873003	GWC-11	Water	06/15/16 14:05	06/17/16 09:50

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
Pace Project No.: 30186873

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30186873001	GWC-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186873002	GWC-12	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30186873003	GWC-11	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186873

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-1 Lab ID: 30186873001 Collected: 06/15/16 10:03 Received: 06/17/16 09:50 Matrix: Water							
PWS: Site ID: Sample Type:							
Radium-226	EPA 9315		0.557 ± 0.190 (0.209) C:96% T:NA	pCi/L	07/18/16 06:32	13982-63-3	
Radium-228	EPA 9320		0.282 ± 0.326 (0.667) C:73% T:92%	pCi/L	07/15/16 00:15	15262-20-1	
Total Radium	Total Radium Calculation		0.839 ± 0.516 (0.876)	pCi/L	07/18/16 13:31	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-12 Lab ID: 30186873002 Collected: 06/15/16 11:23 Received: 06/17/16 09:50 Matrix: Water							
PWS: Site ID: Sample Type:							
Radium-226	EPA 9315		0.274 ± 0.144 (0.218) C:94% T:NA	pCi/L	07/18/16 06:31	13982-63-3	
Radium-228	EPA 9320		0.687 ± 0.421 (0.773) C:63% T:90%	pCi/L	07/15/16 00:15	15262-20-1	
Total Radium	Total Radium Calculation		0.961 ± 0.565 (0.991)	pCi/L	07/18/16 13:31	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-11 Lab ID: 30186873003 Collected: 06/15/16 14:05 Received: 06/17/16 09:50 Matrix: Water							
PWS: Site ID: Sample Type:							
Radium-226	EPA 9315		0.170 ± 0.112 (0.183) C:92% T:NA	pCi/L	07/18/16 06:31	13982-63-3	
Radium-228	EPA 9320		0.148 ± 0.324 (0.692) C:75% T:84%	pCi/L	07/15/16 00:15	15262-20-1	
Total Radium	Total Radium Calculation		0.318 ± 0.436 (0.875)	pCi/L	07/18/16 13:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186873

QC Batch: 225695 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30186873001, 30186873002, 30186873003

METHOD BLANK: 1105636 Matrix: Water
 Associated Lab Samples: 30186873001, 30186873002, 30186873003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.650 ± 0.476 (0.938) C:76% T:74%	pCi/L	07/14/16 20:11	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30186873

QC Batch: 225788 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30186873001, 30186873002, 30186873003

METHOD BLANK: 1106277 Matrix: Water
 Associated Lab Samples: 30186873001, 30186873002, 30186873003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.148 ± 0.104 (0.170) C:93% T:NA	pCi/L	07/18/16 06:29	

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.

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QUALIFIERS

Project: Plant McIntosh LF #4
Pace Project No.: 30186873

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

WO#: 30186873

Custody seal ID: 20160615-02



X 12 Standard Turnaround Time

Sample Shipment Date: 6/15/16
 Sample Received Date: 6/15/16

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

Sampled By: Tracy Wardell
 # of Business Days (Rush):
 (Must be cleared through Env. Lab. Prior to shipment)

Stephanie Dun
 Signature

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

LAB USE ONLY LAB ID	Sample Number	Collection		Sample Description	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED				PRESERVATIVE				Sample Type Key: 22 G-Grab O-Other C-Composite	Matrix Key: 23 S-Solid SL-Sludge W-White SW-Surface Water WW-Waste Water DW-Drinking Water	Preservative Key: 24 H-Hydrochloric Acid H-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SS-Sodium Bisulfite P-Phosphoric Acid ST-Sodium Thiosulfate He-U-Ultraviolet
		Date	Time					HNO3 N	HNO3 N	Ice I	MNES N	HND3 N	ANALYSIS REQUESTED	ANALYSIS REQUESTED	ANALYSIS REQUESTED			
	GWC-1	6/15/16	10:03		G	GW	3	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 Cl, F, SO4 EPA 300 TDS SM2540C	✓	✓	✓	✓	✓	✓	✓	RA-SW-816 Q315+Q320 Ga Tech Redum 226 & 228	001	
	GWC-12	6/15/16	11:23		G	GW	3		✓	✓	✓	✓	✓	✓	✓		002	
	GWC-11	6/15/16	14:05		G	GW	3		✓	✓	✓	✓	✓	✓	✓		003	

LAB USE ONLY: Sample Receipt Information			
Relinquished by:	6/15/16/16S	Date/Time	
Received by:	6/16/16 @ 11:30	Date/Time	
Relinquished by:	6-16-16 @ 160	Date/Time	
Received by:	6-17-16/0950	Date/Time	

Sample Condition Upon Receipt Pittsburgh

30186873



Client Name: Georgia Poner Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7833 7882 5316 and 6-17-16

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used 6 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 1.2 °C Correction Factor: -0.1 °C Final Temp: 1.1 °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: APR 6-17-16

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:	X			5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
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:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13.
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>APR</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:		X		15.
Trip Blank Custody Seals Present			X	

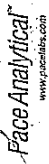
Client Notification/ Resolution:

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



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30290
Matrix: DW

Method Blank Assessment

MB Sample ID: 1106277
MB Concentration: 0.148
MB Counting Uncertainty: 0.101
MB MDC: 0.170
MB Numerical Performance Indicator: 2.87
MB Status vs Numerical Indicator: N/A
MB Status vs MDC: Pass

Laboratory Control Sample Assessment

LCSID (Y or N)?	Count Date:	Count Rate:	Y
LCS30290	7/18/2016	16-001	Y
LCS30290	7/18/2016	47.784	Y
		0.10	
		0.500	
		9.551	
		0.449	
		7.650	
		0.580	
		-5.08	
		80.09%	
		N/A	
		Pass	

Duplicate Sample Assessment

Sample I.D.: LCS30290
Duplicate Sample I.D.: LCS30290
Sample Result (pCi/L, g, F): 7.199
Sample Duplicate Result (pCi/L, g, F): 0.545
Sample Duplicate Result (pCi/L, g, F): 7.650
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.580
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: -1.111
Duplicate RPD: 6.07%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature and date: 7/18/16

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 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:
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:

Quality Control Sample Performance Assessment

Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30277
Matrix: DW



Method Blank Assessment	
MB Sample ID	1105636
MB concentration:	0.650
MB Counting Uncertainty:	0.462
MB MDC:	0.938
MB Numerical Performance Indicator:	2.76
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS(Y or N)?	Y
LCS30277	LCS30277
Count Date:	7/14/2016
Spike I.D.:	15-018
Spike Concentration (pCi/mL):	23.362
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.801
Target Conc. (pCi/L, g, F):	5.830
Uncertainty (Calculated):	0.233
Result (pCi/L, g, F):	5.646
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.772
Numerical Performance Indicator:	-0.45
Percent Recovery:	96.65%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS30277
Duplicate Sample I.D.:	LCS30277
Sample Result (pCi/L, g, F):	5.646
Sample Result Counting Uncertainty (pCi/L, g, F):	0.772
Sample Duplicate Result (pCi/L, g, F):	5.493
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.666
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.295
Duplicate RPD:	2.75%
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.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (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 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:	
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.:	
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/initials



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: AZF0706

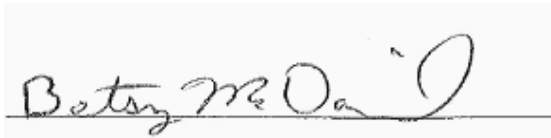
July 01, 2016

Project: CCR Event

Project #: Plant McIntosh LF #4

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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All test results relate only to the samples analyzed.



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Georgia Power
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Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GWC-18	AZF0706-01	Ground Water	06/16/16 15:15	06/17/16 15:30
GWC-21	AZF0706-02	Ground Water	06/16/16 10:45	06/17/16 15:30
FB-2	AZF0706-03	DI Water	06/16/16 16:20	06/17/16 15:30
GWC-23	AZF0706-04	Ground Water	06/16/16 13:01	06/17/16 15:30
GWC-22	AZF0706-05	Ground Water	06/16/16 09:56	06/17/16 15:30
FERB-2	AZF0706-06	DI Water	06/16/16 16:30	06/17/16 15:30
GWC-19	AZF0706-07	Ground Water	06/16/16 13:44	06/17/16 15:30
GWC-20	AZF0706-08	Ground Water	06/16/16 11:40	06/17/16 15:30
Dup-2	AZF0706-09	Ground Water	06/16/16 00:00	06/17/16 15:30
GWC-10	AZF0706-10	Ground Water	06/16/16 09:40	06/17/16 15:30



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July 01, 2016

Case Narrative

Plant McIntosh LF #4 report AZF0706 - 7/1/2016

Work order revised for client request to adjust QC source data in batch 6060462 to correspond with the same analytical run as sample data AZF0706-06.



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-18

Lab Number ID: AZF0706-01

Date/Time Sampled: 6/16/2016 3:15:00PM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	150	25	10	mg/L	SM 2540 C		1	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	4.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 03:56	6060462	RLC
Fluoride	0.56	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 03:56	6060462	RLC
Sulfate	9.0	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 03:56	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-21

Lab Number ID: AZF0706-02

Date/Time Sampled: 6/16/2016 10:45:00AM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	30	25	10	mg/L	SM 2540 C		1	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	5.8	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/23/16 00:46	6060462	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 18:29	06/23/16 00:46	6060462	RLC
Sulfate	1.6	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/23/16 00:46	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: FB-2

Lab Number ID: AZF0706-03

Date/Time Sampled: 6/16/2016 4:20:00PM

Date/Time Received: 6/17/2016 3:30:00PM

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	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	06/17/16 18:29	06/23/16 01:48	6060462	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 18:29	06/23/16 01:48	6060462	RLC
Sulfate	0.12	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/23/16 01:48	6060462	RLC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-23

Lab Number ID: AZF0706-04

Date/Time Sampled: 6/16/2016 1:01:00PM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	78	25	10	mg/L	SM 2540 C		1	06/21/16 18:15	06/21/16 18:15	6060507	JPT
Inorganic Anions											
Chloride	5.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 04:58	6060462	RLC
Fluoride	0.04	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/18/16 04:58	6060462	RLC
Sulfate	9.2	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 04:58	6060462	RLC



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-22

Lab Number ID: AZF0706-05

Date/Time Sampled: 6/16/2016 9:56:00AM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	128	25	10	mg/L	SM 2540 C		1	06/22/16 20:45	06/22/16 20:45	6060554	JPT
Inorganic Anions											
Chloride	4.5	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 05:19	6060462	RLC
Fluoride	0.18	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/18/16 05:19	6060462	RLC
Sulfate	4.6	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 05:19	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: FERB-2

Lab Number ID: AZF0706-06

Date/Time Sampled: 6/16/2016 4:30:00PM

Date/Time Received: 6/17/2016 3:30:00PM

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	06/21/16 18:40	06/21/16 18:40	6060508	JPT
Inorganic Anions											
Chloride	0.03	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	06/17/16 18:29	06/23/16 02:09	6060462	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 18:29	06/23/16 02:09	6060462	RLC
Sulfate	0.21	1.0	0.05	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/23/16 02:09	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-19

Lab Number ID: AZF0706-07

Date/Time Sampled: 6/16/2016 1:44:00PM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	34	25	10	mg/L	SM 2540 C		1	06/21/16 18:40	06/21/16 18:40	6060508	JPT
Inorganic Anions											
Chloride	5.7	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 06:41	6060462	RLC
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/18/16 06:41	6060462	RLC
Sulfate	2.5	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 06:41	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-20

Lab Number ID: AZF0706-08

Date/Time Sampled: 6/16/2016 11:40:00AM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	42	25	10	mg/L	SM 2540 C		1	06/21/16 18:40	06/21/16 18:40	6060508	JPT
Inorganic Anions											
Chloride	10	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 07:02	6060462	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 07:02	6060462	RLC
Sulfate	3.9	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 07:02	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: Dup-2

Lab Number ID: AZF0706-09

Date/Time Sampled: 6/16/2016 12:00:00AM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	119	25	10	mg/L	SM 2540 C		1	06/21/16 18:40	06/21/16 18:40	6060508	JPT
Inorganic Anions											
Chloride	6.2	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 08:45	6060462	RLC
Fluoride	0.15	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/18/16 08:45	6060462	RLC
Sulfate	2.3	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 08:45	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

Project: CCR Event

Client ID: GWC-10

Lab Number ID: AZF0706-10

Date/Time Sampled: 6/16/2016 9:40:00AM

Date/Time Received: 6/17/2016 3:30:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	109	25	10	mg/L	SM 2540 C		1	06/21/16 18:40	06/21/16 18:40	6060508	JPT
Inorganic Anions											
Chloride	6.0	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/17/16 18:29	06/18/16 09:06	6060462	RLC
Fluoride	0.13	0.30	0.02	mg/L	EPA 300.0	J	1	06/17/16 18:29	06/18/16 09:06	6060462	RLC
Sulfate	2.3	1.0	0.05	mg/L	EPA 300.0		1	06/17/16 18:29	06/18/16 09:06	6060462	RLC



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060507 - SM 2540 C											
Blank (6060507-BLK1)						Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	ND	10	10	mg/L							
LCS (6060507-BS1)						Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	384	10	10	mg/L	400.00		96	84-108			
Duplicate (6060507-DUP2)						Source: AZF0655-01 Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	1880	10	10	mg/L		1880			0.05	10	
Batch 6060508 - SM 2540 C											
Blank (6060508-BLK1)						Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6060508-BS1)						Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	378	25	10	mg/L	400.00		94	84-108			
Duplicate (6060508-DUP1)						Source: AZF0706-10 Prepared & Analyzed: 06/21/16					
Total Dissolved Solids	112	25	10	mg/L		109			3	10	
Batch 6060554 - SM 2540 C											
Blank (6060554-BLK1)						Prepared & Analyzed: 06/22/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6060554-BS1)						Prepared & Analyzed: 06/22/16					
Total Dissolved Solids	402	25	10	mg/L	400.00		100	84-108			



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Attention: Mr. Joju Abraham

July 01, 2016

Report No.: AZF0706

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060554 - SM 2540 C											
Duplicate (6060554-DUP1)			Source: AZF0706-05			Prepared & Analyzed: 06/22/16					
Total Dissolved Solids	133	25	10	mg/L		128			4	10	



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July 01, 2016

Report No.: AZF0706

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060462 - EPA 300.0											
Blank (6060462-BLK1)						Prepared: 06/17/16 Analyzed: 06/18/16					
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 (6060462-BS1)						Prepared: 06/17/16 Analyzed: 06/18/16					
Chloride	9.81	0.25	0.01	mg/L	10.010		98	90-110			
Fluoride	10.4	0.30	0.02	mg/L	10.010		104	90-110			
Sulfate	10.2	1.0	0.05	mg/L	10.010		102	90-110			
Matrix Spike (6060462-MS1)						Source: AZF0706-06RE1 Prepared: 06/17/16 Analyzed: 06/18/16					
Chloride	8.81	0.25	0.01	mg/L	10.010	0.03	88	90-110			QM-05
Fluoride	9.50	0.30	0.02	mg/L	10.010	ND	95	90-110			
Sulfate	9.12	1.0	0.05	mg/L	10.010	0.21	89	90-110			QM-05
Matrix Spike (6060462-MS2)						Source: AZF0706-02RE1 Prepared: 06/17/16 Analyzed: 06/23/16					
Chloride	15.9	0.25	0.01	mg/L	10.010	5.78	101	90-110			
Fluoride	10.9	0.30	0.02	mg/L	10.010	ND	109	90-110			
Sulfate	11.5	1.0	0.05	mg/L	10.010	1.56	100	90-110			
Matrix Spike Dup (6060462-MSD1)						Source: AZF0706-06RE1 Prepared: 06/17/16 Analyzed: 06/18/16					
Chloride	9.54	0.25	0.01	mg/L	10.010	0.03	95	90-110	8	15	
Fluoride	10.1	0.30	0.02	mg/L	10.010	ND	101	90-110	6	15	
Sulfate	9.87	1.0	0.05	mg/L	10.010	0.21	97	90-110	8	15	
Matrix Spike Dup (6060462-MSD2)						Source: AZF0706-02RE1 Prepared: 06/17/16 Analyzed: 06/23/16					
Chloride	15.9	0.25	0.01	mg/L	10.010	5.78	101	90-110	0.06	15	
Fluoride	10.8	0.30	0.02	mg/L	10.010	ND	107	90-110	1	15	
Sulfate	11.5	1.0	0.05	mg/L	10.010	1.56	99	90-110	0.4	15	



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Attention: Mr. Joju Abraham

July 01, 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-05** The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.
- 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.



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: 7/1/2016 3:24:59PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 06/17/16 15:30

Work Order: AZF0706

Logged In By: Charles Hawks

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:

June 23, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302016

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 18, 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 LF #4

Pace Project No.: 92302016

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

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SAMPLE SUMMARY

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92302016001	GWC-18	Water	06/16/16 15:15	06/18/16 10:30
92302016002	GWC-21	Water	06/16/16 10:45	06/18/16 10:30
92302016003	FB-2	Water	06/16/16 16:20	06/18/16 10:30

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SAMPLE ANALYTE COUNT

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92302016001	GWC-18	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302016002	GWC-21	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302016003	FB-2	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

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SUMMARY OF DETECTION

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92302016001	GWC-18					
EPA 6020B	Antimony	0.00022J	mg/L	0.0030	06/21/16 18:00	
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	06/21/16 18:00	
EPA 6020B	Barium	0.029	mg/L	0.010	06/21/16 18:00	
EPA 6020B	Boron	0.011J	mg/L	0.10	06/21/16 18:00	
EPA 6020B	Cadmium	0.000085J	mg/L	0.0010	06/21/16 18:00	
EPA 6020B	Calcium	33.2	mg/L	0.50	06/21/16 18:00	
EPA 6020B	Chromium	0.0021J	mg/L	0.010	06/21/16 18:00	
EPA 6020B	Cobalt	0.00017J	mg/L	0.010	06/21/16 18:00	
EPA 6020B	Copper	0.00068J	mg/L	0.025	06/21/16 18:00	B
EPA 6020B	Lead	0.00015J	mg/L	0.0050	06/21/16 18:00	
EPA 6020B	Lithium	0.0034J	mg/L	0.050	06/21/16 18:00	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	06/21/16 18:00	
EPA 6020B	Nickel	0.0014J	mg/L	0.010	06/21/16 18:00	
EPA 6020B	Thallium	0.00013J	mg/L	0.0010	06/21/16 18:00	
EPA 6020B	Vanadium	0.0041J	mg/L	0.010	06/21/16 18:00	
EPA 6020B	Zinc	0.0052J	mg/L	0.010	06/21/16 18:00	
92302016002	GWC-21					
EPA 6020B	Arsenic	0.00046J	mg/L	0.0050	06/21/16 18:04	
EPA 6020B	Barium	0.018	mg/L	0.010	06/21/16 18:04	
EPA 6020B	Boron	0.012J	mg/L	0.10	06/21/16 18:04	
EPA 6020B	Cadmium	0.00012J	mg/L	0.0010	06/21/16 18:04	
EPA 6020B	Calcium	2.9	mg/L	0.50	06/21/16 18:04	
EPA 6020B	Chromium	0.00031J	mg/L	0.010	06/21/16 18:04	
EPA 6020B	Cobalt	0.0021J	mg/L	0.010	06/21/16 18:04	
EPA 6020B	Copper	0.00042J	mg/L	0.025	06/21/16 18:04	B
EPA 6020B	Lithium	0.00088J	mg/L	0.050	06/21/16 18:04	B
EPA 6020B	Nickel	0.0012J	mg/L	0.010	06/21/16 18:04	
EPA 6020B	Thallium	0.000027J	mg/L	0.0010	06/21/16 18:04	
EPA 6020B	Vanadium	0.00048J	mg/L	0.010	06/21/16 18:04	B
EPA 6020B	Zinc	0.0097J	mg/L	0.010	06/21/16 18:04	
92302016003	FB-2					
EPA 6020B	Chromium	0.00014J	mg/L	0.010	06/21/16 18:08	
EPA 6020B	Copper	0.00015J	mg/L	0.025	06/21/16 18:08	B
EPA 6020B	Vanadium	0.00034J	mg/L	0.010	06/21/16 18:08	B

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Sample: GWC-18 **Lab ID: 92302016001** Collected: 06/16/16 15:15 Received: 06/18/16 10:30 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	0.00022J	mg/L	0.0030	0.00010	1	06/20/16 17:30	06/21/16 18:00	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:00	7440-38-2	
Barium	0.029	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:00	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:00	7440-41-7	
Boron	0.011J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:00	7440-42-8	
Cadmium	0.000085J	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:00	7440-43-9	
Calcium	33.2	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:00	7440-70-2	
Chromium	0.0021J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:00	7440-47-3	
Cobalt	0.00017J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:00	7440-48-4	
Copper	0.00068J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:00	7440-50-8	B
Lead	0.00015J	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:00	7439-92-1	
Lithium	0.0034J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:00	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:00	7439-98-7	
Nickel	0.0014J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:00	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:00	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:00	7440-22-4	
Thallium	0.00013J	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:00	7440-28-0	
Vanadium	0.0041J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:00	7440-62-2	
Zinc	0.0052J	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:00	7440-66-6	
7470 Mercury			Analytical Method: EPA 7470 Preparation Method: EPA 7470						
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:19	7439-97-6	

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Sample: GWC-21		Lab ID: 92302016002		Collected: 06/16/16 10:45		Received: 06/18/16 10:30		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	06/20/16 17:30	06/21/16 18:04	7440-36-0		
Arsenic	0.00046J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:04	7440-38-2		
Barium	0.018	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:04	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:04	7440-41-7		
Boron	0.012J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:04	7440-42-8		
Cadmium	0.00012J	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:04	7440-43-9		
Calcium	2.9	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:04	7440-70-2		
Chromium	0.00031J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:04	7440-47-3		
Cobalt	0.0021J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:04	7440-48-4		
Copper	0.00042J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:04	7440-50-8	B	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:04	7439-92-1		
Lithium	0.00088J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:04	7439-93-2	B	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:04	7439-98-7		
Nickel	0.0012J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:04	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:04	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:04	7440-22-4		
Thallium	0.000027J	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:04	7440-28-0		
Vanadium	0.00048J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:04	7440-62-2	B	
Zinc	0.0097J	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:04	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:22	7439-97-6		

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Sample: FB-2		Lab ID: 92302016003		Collected: 06/16/16 16:20		Received: 06/18/16 10:30		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	06/20/16 17:30	06/21/16 18:08	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:08	7440-38-2		
Barium	ND	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:08	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:08	7440-41-7		
Boron	ND	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:08	7440-42-8		
Cadmium	ND	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:08	7440-43-9		
Calcium	ND	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:08	7440-70-2		
Chromium	0.00014J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:08	7440-47-3		
Cobalt	ND	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:08	7440-48-4		
Copper	0.00015J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:08	7440-50-8	B	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:08	7439-92-1		
Lithium	ND	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:08	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:08	7439-98-7		
Nickel	ND	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:08	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:08	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:08	7440-22-4		
Thallium	ND	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:08	7440-28-0		
Vanadium	0.00034J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:08	7440-62-2	B	
Zinc	ND	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:08	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:24	7439-97-6		

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302016

QC Batch: MERP/9638 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92302016001, 92302016002, 92302016003

METHOD BLANK: 1759560 Matrix: Water
Associated Lab Samples: 92302016001, 92302016002, 92302016003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/22/16 14:26	

LABORATORY CONTROL SAMPLE: 1759561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759562 1759563

Parameter	Units	92302013001 Result	MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Conc.	Spike Conc.	Conc.							
Mercury	mg/L	ND	.0025	.0025	0.0023	0.0023	92	91	75-125	0	25		

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302016

QC Batch: MPRP/22098 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Associated Lab Samples: 92302016001, 92302016002, 92302016003

METHOD BLANK: 1759761 Matrix: Water
Associated Lab Samples: 92302016001, 92302016002, 92302016003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/21/16 16:31	
Arsenic	mg/L	ND	0.0050	0.000050	06/21/16 16:31	
Barium	mg/L	ND	0.010	0.00011	06/21/16 16:31	
Beryllium	mg/L	ND	0.0030	0.000020	06/21/16 16:31	
Boron	mg/L	0.0010J	0.10	0.00057	06/21/16 16:31	
Cadmium	mg/L	ND	0.0010	0.000060	06/21/16 16:31	
Calcium	mg/L	ND	0.50	0.10	06/21/16 16:31	
Chromium	mg/L	ND	0.010	0.00010	06/21/16 16:31	
Cobalt	mg/L	ND	0.010	0.000010	06/21/16 16:31	
Copper	mg/L	0.00022J	0.025	0.00012	06/21/16 16:31	
Lead	mg/L	ND	0.0050	0.000080	06/21/16 16:31	
Lithium	mg/L	0.00011J	0.050	0.000070	06/21/16 16:31	
Molybdenum	mg/L	ND	0.010	0.00011	06/21/16 16:31	
Nickel	mg/L	ND	0.010	0.00045	06/21/16 16:31	
Selenium	mg/L	ND	0.010	0.00032	06/21/16 16:31	
Silver	mg/L	ND	0.010	0.000080	06/21/16 16:31	
Thallium	mg/L	ND	0.0010	0.000020	06/21/16 16:31	
Vanadium	mg/L	0.000097J	0.010	0.000070	06/21/16 16:31	
Zinc	mg/L	ND	0.010	0.0024	06/21/16 16:31	

LABORATORY CONTROL SAMPLE: 1759762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	100	80-120	
Boron	mg/L	.1	0.093J	93	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1.2	1.3	102	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Copper	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.10	100	80-120	
Molybdenum	mg/L	.1	0.10	100	80-120	
Nickel	mg/L	.1	0.10	102	80-120	
Selenium	mg/L	.1	0.095	95	80-120	
Silver	mg/L	.1	0.10	105	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

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.

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

LABORATORY CONTROL SAMPLE: 1759762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.1	0.10	100	80-120	
Zinc	mg/L	.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759763 1759764

Parameter	Units	92302013001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20	
Arsenic	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	
Barium	mg/L	0.011	.1	.1	0.11	0.11	97	98	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	0	20	
Boron	mg/L	0.0013J	.1	.1	0.099J	0.099J	98	98	75-125	0	20	
Cadmium	mg/L	0.00017J	.1	.1	0.10	0.10	99	99	75-125	0	20	
Calcium	mg/L	14.3	1.2	1.2	15.4	15.6	83	101	75-125	1	20	
Chromium	mg/L	0.010	.1	.1	0.11	0.11	100	101	75-125	1	20	
Cobalt	mg/L	0.000070J	.1	.1	0.10	0.10	101	100	75-125	1	20	
Copper	mg/L	0.00030J	.1	.1	0.10	0.10	101	102	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	
Lithium	mg/L	0.000074J	.1	.1	0.10	0.099	102	99	75-125	3	20	
Molybdenum	mg/L	0.00016J	.1	.1	0.10	0.10	100	99	75-125	0	20	
Nickel	mg/L	ND	.1	.1	0.099	0.10	99	99	75-125	0	20	
Selenium	mg/L	ND	.1	.1	0.097	0.098	97	98	75-125	1	20	
Silver	mg/L	ND	.1	.1	0.10	0.10	102	102	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20	
Vanadium	mg/L	0.010	.1	.1	0.11	0.11	99	98	75-125	1	20	
Zinc	mg/L	ND	.1	.1	0.10	0.10	98	98	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759765 1759766

Parameter	Units	92302013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Arsenic	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20	
Barium	mg/L	ND	.1	.1	0.12	0.12	120	118	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.099	102	99	75-125	3	20	
Boron	mg/L	ND	.1	.1	0.11	0.11	114	114	75-125	0	20	
Cadmium	mg/L	0.000088J	.1	.1	0.10	0.099	101	99	75-125	2	20	
Calcium	mg/L	ND	1.2	1.2	20.4	19.3	1630	1540	75-125	5	20	M1
Chromium	mg/L	0.0024J	.1	.1	0.11	0.10	105	103	75-125	3	20	
Cobalt	mg/L	0.000021J	.1	.1	0.10	0.098	100	98	75-125	3	20	
Copper	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20	
Lithium	mg/L	ND	.1	.1	0.11	0.11	107	106	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	102	100	75-125	2	20	

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 DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302016

Parameter	Units	1759765		1759766		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92302013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Nickel	mg/L	0.00065J	.1	.1	0.099	0.096	99	96	75-125	3	20	
Selenium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	4	20	
Silver	mg/L	ND	.1	.1	0.10	0.10	104	101	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Vanadium	mg/L	0.00032J	.1	.1	0.10	0.098	100	98	75-125	3	20	
Zinc	mg/L	ND	.1	.1	0.099	0.098	98	97	75-125	2	20	

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 LF #4

Pace Project No.: 92302016

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 LF #4

Pace Project No.: 92302016

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92302016001	GWC-18	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302016002	GWC-21	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302016003	FB-2	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302016001	GWC-18	EPA 7470	MERP/9638	EPA 7470	MERC/9272
92302016002	GWC-21	EPA 7470	MERP/9638	EPA 7470	MERC/9272
92302016003	FB-2	EPA 7470	MERP/9638	EPA 7470	MERC/9272

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Sample Condition Upon Receipt

Client Name: Georgia Power Project #:

WO#: **92302016**



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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: R-6/18/14

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): 2.8 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 checked="" 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>WSW</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 HCl pH<2 H2SO4 pH<2 NaOH pH>12 NaOH/ZnOAc pH>9
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
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: 6/20/16

Project Manager SRF Review: MS Date: 6/20/16

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)

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. 92302016
 Reviewed By: _____
 11 Page 1 of 1

20160616-08

Sample Shipment Date: 6/16/16 Standard Turnaround Time

Sample Received Date: _____
 Sampled By: Amanda Storrer,
Myles Rogers

Company: Southern Company Services
 Report To: Jojo Abraham
 Address: 241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
 Phone/Fax: 404-506-7239
 Contact: Jojo Abraham
 Project Location: Plant McIntosh LF #4
 Account Number: _____
 Special: _____
 Instructions: CCR + McIntosh #4 State GW

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	Comments
		Date	Time					HNO3 N	HNO3 N	Ice I	HNO3 H	HNO3 N	C-Grab C-Other C-Composite			
	GWC-18	6/16/16	15:15		G	GW	3	√	√	√	√	√	√	√		
	GWC-21	6/16/16	10:45		G	GW	3	√	√	√	√	√	√	√		
	FB-2	6/16/16	16:20		G	DI	3	√	√	√	√	√	√	√		

LAB USE ONLY: Sample Receipt Information ²³

Relinquished by: J Randall Date/Time 6/16/16 19:00
 Received by: Amanda Storrer Date/Time 6/16/16 10:35
 Relinquished by: _____ Date/Time _____
 Received by: Myles Rogers Date/Time 6/16/16 10:30
2.S

#DI = Distilled Water

June 23, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302019

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 18, 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 LF #4

Pace Project No.: 92302019

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 LF #4

Pace Project No.: 92302019

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92302019001	GWC-23	Water	06/16/16 13:01	06/18/16 10:30
92302019002	GWC-22	Water	06/16/16 09:56	06/18/16 10:30
92302019003	FERB-2	Water	06/16/16 16:30	06/18/16 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92302019001	GWC-23	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302019002	GWC-22	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302019003	FERB-2	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92302019001	GWC-23					
EPA 6020B	Arsenic	0.00043J	mg/L	0.0050	06/21/16 18:39	
EPA 6020B	Barium	0.057	mg/L	0.010	06/21/16 18:39	
EPA 6020B	Boron	0.017J	mg/L	0.10	06/21/16 18:39	
EPA 6020B	Calcium	15.6	mg/L	0.50	06/21/16 18:39	
EPA 6020B	Chromium	0.00023J	mg/L	0.010	06/21/16 18:39	
EPA 6020B	Cobalt	0.0019J	mg/L	0.010	06/21/16 18:39	
EPA 6020B	Copper	0.0011J	mg/L	0.025	06/21/16 18:39	B
EPA 6020B	Lithium	0.0010J	mg/L	0.050	06/21/16 18:39	B
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	06/21/16 18:39	
EPA 6020B	Nickel	0.00090J	mg/L	0.010	06/21/16 18:39	
EPA 6020B	Vanadium	0.00063J	mg/L	0.010	06/21/16 18:39	B
EPA 6020B	Zinc	0.0098J	mg/L	0.010	06/21/16 18:39	
92302019002	GWC-22					
EPA 6020B	Antimony	0.00019J	mg/L	0.0030	06/21/16 18:43	
EPA 6020B	Arsenic	0.0031J	mg/L	0.0050	06/21/16 18:43	
EPA 6020B	Barium	0.063	mg/L	0.010	06/21/16 18:43	
EPA 6020B	Beryllium	0.000031J	mg/L	0.0030	06/21/16 18:43	
EPA 6020B	Boron	0.015J	mg/L	0.10	06/21/16 18:43	
EPA 6020B	Cadmium	0.000082J	mg/L	0.0010	06/21/16 18:43	
EPA 6020B	Calcium	22.2	mg/L	0.50	06/21/16 18:43	
EPA 6020B	Chromium	0.00018J	mg/L	0.010	06/21/16 18:43	
EPA 6020B	Cobalt	0.0035J	mg/L	0.010	06/21/16 18:43	
EPA 6020B	Copper	0.00023J	mg/L	0.025	06/21/16 18:43	B
EPA 6020B	Lithium	0.0032J	mg/L	0.050	06/21/16 18:43	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	06/21/16 18:43	
EPA 6020B	Nickel	0.0024J	mg/L	0.010	06/21/16 18:43	
EPA 6020B	Thallium	0.000033J	mg/L	0.0010	06/21/16 18:43	
EPA 6020B	Vanadium	0.0014J	mg/L	0.010	06/21/16 18:43	
92302019003	FERB-2					
EPA 6020B	Barium	0.00026J	mg/L	0.010	06/21/16 18:59	
EPA 6020B	Chromium	0.00023J	mg/L	0.010	06/21/16 18:59	
EPA 6020B	Cobalt	0.000026J	mg/L	0.010	06/21/16 18:59	
EPA 6020B	Copper	0.00014J	mg/L	0.025	06/21/16 18:59	
EPA 6020B	Thallium	0.000021J	mg/L	0.0010	06/21/16 18:59	
EPA 6020B	Vanadium	0.00032J	mg/L	0.010	06/21/16 18:59	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

Sample: GWC-23 Lab ID: 92302019001 Collected: 06/16/16 13:01 Received: 06/18/16 10:30 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	06/20/16 17:30	06/21/16 18:39	7440-36-0	
Arsenic	0.00043J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:39	7440-38-2	
Barium	0.057	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:39	7440-41-7	
Boron	0.017J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:39	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:39	7440-43-9	
Calcium	15.6	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:39	7440-70-2	
Chromium	0.00023J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:39	7440-47-3	
Cobalt	0.0019J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:39	7440-48-4	
Copper	0.0011J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:39	7440-50-8	B
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:39	7439-92-1	
Lithium	0.0010J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:39	7439-93-2	B
Molybdenum	0.0015J	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:39	7439-98-7	
Nickel	0.00090J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:39	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:39	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:39	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:39	7440-28-0	
Vanadium	0.00063J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:39	7440-62-2	B
Zinc	0.0098J	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:39	7440-66-6	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 16:07	06/22/16 15:51	7439-97-6	

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

Sample: GWC-22 **Lab ID: 92302019002** Collected: 06/16/16 09:56 Received: 06/18/16 10:30 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	0.00019J	mg/L	0.0030	0.00010	1	06/20/16 17:30	06/21/16 18:43	7440-36-0	
Arsenic	0.0031J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:43	7440-38-2	
Barium	0.063	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:43	7440-39-3	
Beryllium	0.000031J	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:43	7440-41-7	
Boron	0.015J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:43	7440-42-8	
Cadmium	0.000082J	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:43	7440-43-9	
Calcium	22.2	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:43	7440-70-2	
Chromium	0.00018J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:43	7440-47-3	
Cobalt	0.0035J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:43	7440-48-4	
Copper	0.00023J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:43	7440-50-8	B
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:43	7439-92-1	
Lithium	0.0032J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:43	7439-93-2	
Molybdenum	0.0038J	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:43	7439-98-7	
Nickel	0.0024J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:43	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:43	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:43	7440-22-4	
Thallium	0.000033J	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:43	7440-28-0	
Vanadium	0.0014J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:43	7440-62-2	
Zinc	ND	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:43	7440-66-6	
7470 Mercury			Analytical Method: EPA 7470 Preparation Method: EPA 7470						
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 16:07	06/22/16 15:59	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

Sample: FERB-2 **Lab ID: 92302019003** Collected: 06/16/16 16:30 Received: 06/18/16 10:30 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	06/20/16 21:30	06/21/16 18:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/20/16 21:30	06/21/16 18:59	7440-38-2	
Barium	0.00026J	mg/L	0.010	0.00011	1	06/20/16 21:30	06/21/16 18:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/20/16 21:30	06/21/16 18:59	7440-41-7	
Boron	ND	mg/L	0.10	0.00057	1	06/20/16 21:30	06/21/16 18:59	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000060	1	06/20/16 21:30	06/21/16 18:59	7440-43-9	
Calcium	ND	mg/L	0.50	0.10	1	06/20/16 21:30	06/21/16 18:59	7440-70-2	
Chromium	0.00023J	mg/L	0.010	0.00010	1	06/20/16 21:30	06/21/16 18:59	7440-47-3	
Cobalt	0.000026J	mg/L	0.010	0.000010	1	06/20/16 21:30	06/21/16 18:59	7440-48-4	
Copper	0.00014J	mg/L	0.025	0.00012	1	06/20/16 21:30	06/21/16 18:59	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 21:30	06/21/16 18:59	7439-92-1	
Lithium	ND	mg/L	0.050	0.000070	1	06/20/16 21:30	06/21/16 18:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00011	1	06/20/16 21:30	06/21/16 18:59	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/20/16 21:30	06/21/16 18:59	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 21:30	06/21/16 18:59	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 21:30	06/21/16 18:59	7440-22-4	
Thallium	0.000021J	mg/L	0.0010	0.000020	1	06/20/16 21:30	06/21/16 18:59	7440-28-0	
Vanadium	0.00032J	mg/L	0.010	0.000070	1	06/20/16 21:30	06/21/16 18:59	7440-62-2	B
Zinc	ND	mg/L	0.010	0.0024	1	06/20/16 21:30	06/21/16 18:59	7440-66-6	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 16:07	06/22/16 16:01	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

QC Batch: MERP/9643 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 92302019001, 92302019002, 92302019003

METHOD BLANK: 1760100 Matrix: Water

Associated Lab Samples: 92302019001, 92302019002, 92302019003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/22/16 15:37	

LABORATORY CONTROL SAMPLE: 1760101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0023	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1760102 1760103

Parameter	Units	1760102		1760103		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		92302019001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Mercury	mg/L	ND	.0025	.0025	0.0022	0.0022	90	90	75-125	0	25		

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302019

QC Batch: MPRP/22098 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Associated Lab Samples: 92302019001, 92302019002

METHOD BLANK: 1759761 Matrix: Water
Associated Lab Samples: 92302019001, 92302019002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/21/16 16:31	
Arsenic	mg/L	ND	0.0050	0.000050	06/21/16 16:31	
Barium	mg/L	ND	0.010	0.00011	06/21/16 16:31	
Beryllium	mg/L	ND	0.0030	0.000020	06/21/16 16:31	
Boron	mg/L	0.0010J	0.10	0.00057	06/21/16 16:31	
Cadmium	mg/L	ND	0.0010	0.000060	06/21/16 16:31	
Calcium	mg/L	ND	0.50	0.10	06/21/16 16:31	
Chromium	mg/L	ND	0.010	0.00010	06/21/16 16:31	
Cobalt	mg/L	ND	0.010	0.000010	06/21/16 16:31	
Copper	mg/L	0.00022J	0.025	0.00012	06/21/16 16:31	
Lead	mg/L	ND	0.0050	0.000080	06/21/16 16:31	
Lithium	mg/L	0.00011J	0.050	0.000070	06/21/16 16:31	
Molybdenum	mg/L	ND	0.010	0.00011	06/21/16 16:31	
Nickel	mg/L	ND	0.010	0.00045	06/21/16 16:31	
Selenium	mg/L	ND	0.010	0.00032	06/21/16 16:31	
Silver	mg/L	ND	0.010	0.000080	06/21/16 16:31	
Thallium	mg/L	ND	0.0010	0.000020	06/21/16 16:31	
Vanadium	mg/L	0.000097J	0.010	0.000070	06/21/16 16:31	
Zinc	mg/L	ND	0.010	0.0024	06/21/16 16:31	

LABORATORY CONTROL SAMPLE: 1759762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	100	80-120	
Boron	mg/L	.1	0.093J	93	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1.2	1.3	102	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Copper	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.10	100	80-120	
Molybdenum	mg/L	.1	0.10	100	80-120	
Nickel	mg/L	.1	0.10	102	80-120	
Selenium	mg/L	.1	0.095	95	80-120	
Silver	mg/L	.1	0.10	105	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

LABORATORY CONTROL SAMPLE: 1759762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.1	0.10	100	80-120	
Zinc	mg/L	.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759763 1759764

Parameter	Units	92302013001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20	
Arsenic	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	
Barium	mg/L	0.011	.1	.1	0.11	0.11	97	98	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	0	20	
Boron	mg/L	0.0013J	.1	.1	0.099J	0.099J	98	98	75-125	0	20	
Cadmium	mg/L	0.00017J	.1	.1	0.10	0.10	99	99	75-125	0	20	
Calcium	mg/L	14.3	1.2	1.2	15.4	15.6	83	101	75-125	1	20	
Chromium	mg/L	0.010	.1	.1	0.11	0.11	100	101	75-125	1	20	
Cobalt	mg/L	0.000070J	.1	.1	0.10	0.10	101	100	75-125	1	20	
Copper	mg/L	0.00030J	.1	.1	0.10	0.10	101	102	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	
Lithium	mg/L	0.000074J	.1	.1	0.10	0.099	102	99	75-125	3	20	
Molybdenum	mg/L	0.00016J	.1	.1	0.10	0.10	100	99	75-125	0	20	
Nickel	mg/L	ND	.1	.1	0.099	0.10	99	99	75-125	0	20	
Selenium	mg/L	ND	.1	.1	0.097	0.098	97	98	75-125	1	20	
Silver	mg/L	ND	.1	.1	0.10	0.10	102	102	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20	
Vanadium	mg/L	0.010	.1	.1	0.11	0.11	99	98	75-125	1	20	
Zinc	mg/L	ND	.1	.1	0.10	0.10	98	98	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759765 1759766

Parameter	Units	92302013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Arsenic	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20	
Barium	mg/L	ND	.1	.1	0.12	0.12	120	118	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.099	102	99	75-125	3	20	
Boron	mg/L	ND	.1	.1	0.11	0.11	114	114	75-125	0	20	
Cadmium	mg/L	0.000088J	.1	.1	0.10	0.099	101	99	75-125	2	20	
Calcium	mg/L	ND	1.2	1.2	20.4	19.3	1630	1540	75-125	5	20	M1
Chromium	mg/L	0.0024J	.1	.1	0.11	0.10	105	103	75-125	3	20	
Cobalt	mg/L	0.000021J	.1	.1	0.10	0.098	100	98	75-125	3	20	
Copper	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20	
Lithium	mg/L	ND	.1	.1	0.11	0.11	107	106	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	102	100	75-125	2	20	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

Parameter	Units	1759765		1759766		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Nickel	mg/L	0.00065J	.1	.1	0.099	0.096	99	96	75-125	3	20	
Selenium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	4	20	
Silver	mg/L	ND	.1	.1	0.10	0.10	104	101	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Vanadium	mg/L	0.00032J	.1	.1	0.10	0.098	100	98	75-125	3	20	
Zinc	mg/L	ND	.1	.1	0.099	0.098	98	97	75-125	2	20	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302019

QC Batch: MPRP/22103 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Associated Lab Samples: 92302019003

METHOD BLANK: 1759793 Matrix: Water
Associated Lab Samples: 92302019003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/21/16 18:51	
Arsenic	mg/L	ND	0.0050	0.000050	06/21/16 18:51	
Barium	mg/L	ND	0.010	0.00011	06/21/16 18:51	
Beryllium	mg/L	ND	0.0030	0.000020	06/21/16 18:51	
Boron	mg/L	0.0011J	0.10	0.00057	06/21/16 18:51	
Cadmium	mg/L	ND	0.0010	0.000060	06/21/16 18:51	
Calcium	mg/L	ND	0.50	0.10	06/21/16 18:51	
Chromium	mg/L	ND	0.010	0.00010	06/21/16 18:51	
Cobalt	mg/L	ND	0.010	0.000010	06/21/16 18:51	
Copper	mg/L	ND	0.025	0.00012	06/21/16 18:51	
Lead	mg/L	ND	0.0050	0.000080	06/21/16 18:51	
Lithium	mg/L	ND	0.050	0.000070	06/21/16 18:51	
Molybdenum	mg/L	ND	0.010	0.00011	06/21/16 18:51	
Nickel	mg/L	ND	0.010	0.00045	06/21/16 18:51	
Selenium	mg/L	ND	0.010	0.00032	06/21/16 18:51	
Silver	mg/L	ND	0.010	0.000080	06/21/16 18:51	
Thallium	mg/L	ND	0.0010	0.000020	06/21/16 18:51	
Vanadium	mg/L	0.00042J	0.010	0.000070	06/21/16 18:51	
Zinc	mg/L	ND	0.010	0.0024	06/21/16 18:51	

LABORATORY CONTROL SAMPLE: 1759794

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.098	98	80-120	
Arsenic	mg/L	.1	0.096	96	80-120	
Barium	mg/L	.1	0.095	95	80-120	
Beryllium	mg/L	.1	0.098	98	80-120	
Boron	mg/L	.1	0.098J	98	80-120	
Cadmium	mg/L	.1	0.099	99	80-120	
Calcium	mg/L	1.2	1.2	98	80-120	
Chromium	mg/L	.1	0.098	98	80-120	
Cobalt	mg/L	.1	0.10	100	80-120	
Copper	mg/L	.1	0.098	98	80-120	
Lead	mg/L	.1	0.097	97	80-120	
Lithium	mg/L	.1	0.10	101	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Nickel	mg/L	.1	0.099	99	80-120	
Selenium	mg/L	.1	0.095	95	80-120	
Silver	mg/L	.1	0.10	101	80-120	
Thallium	mg/L	.1	0.098	98	80-120	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

LABORATORY CONTROL SAMPLE: 1759794

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.1	0.097	97	80-120	
Zinc	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759795 1759796

Parameter	Units	92302019003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	.1	.1	0.096	0.094	96	94	75-125	2	20	
Arsenic	mg/L	ND	.1	.1	0.094	0.092	94	92	75-125	2	20	
Barium	mg/L	0.00026J	.1	.1	0.093	0.091	92	91	75-125	2	20	
Beryllium	mg/L	ND	.1	.1	0.094	0.095	94	95	75-125	1	20	
Boron	mg/L	ND	.1	.1	0.097J	0.092J	97	92	75-125	5	20	
Cadmium	mg/L	ND	.1	.1	0.096	0.094	96	94	75-125	2	20	
Calcium	mg/L	ND	1.2	1.2	1.2	1.2	94	91	75-125	3	20	
Chromium	mg/L	0.00023J	.1	.1	0.096	0.094	96	94	75-125	2	20	
Cobalt	mg/L	0.000026J	.1	.1	0.098	0.095	98	95	75-125	3	20	
Copper	mg/L	0.00014J	.1	.1	0.097	0.094	97	94	75-125	3	20	
Lead	mg/L	ND	.1	.1	0.095	0.093	95	93	75-125	2	20	
Lithium	mg/L	ND	.1	.1	0.099	0.094	99	94	75-125	4	20	
Molybdenum	mg/L	ND	.1	.1	0.096	0.093	96	93	75-125	2	20	
Nickel	mg/L	ND	.1	.1	0.097	0.095	97	95	75-125	2	20	
Selenium	mg/L	ND	.1	.1	0.092	0.090	92	90	75-125	2	20	
Silver	mg/L	ND	.1	.1	0.099	0.097	99	97	75-125	2	20	
Thallium	mg/L	0.000021J	.1	.1	0.096	0.095	96	95	75-125	1	20	
Vanadium	mg/L	0.00032J	.1	.1	0.095	0.092	94	92	75-125	3	20	
Zinc	mg/L	ND	.1	.1	0.096	0.093	94	91	75-125	3	20	

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QUALIFIERS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302019

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 LF #4

Pace Project No.: 92302019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92302019001	GWC-23	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302019002	GWC-22	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302019003	FERB-2	EPA 3010A	MPRP/22103	EPA 6020B	ICPM/1322
92302019001	GWC-23	EPA 7470	MERP/9643	EPA 7470	MERC/9273
92302019002	GWC-22	EPA 7470	MERP/9643	EPA 7470	MERC/9273
92302019003	FERB-2	EPA 7470	MERP/9643	EPA 7470	MERC/9273

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: Georgia Paves

Project #: _____

WO#: **92302019**



92302019

Courier:

Commercial

Fed Ex

Pace

UPS

USPS

Client

Other: _____

Custody Seal Present?

Yes

No

Seals Intact?

Yes

No

Packing Material:

Bubble Wrap

Bubble Bags

None

Other: _____

Thermometer:

IR Gun #5 SN:15527198

Correction Factor: 0.0°C

Cooler Temp Corrected (°C): 2.8

Type of Ice:

Wet

Blue

None

Samples on ice, cooling process has begun

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:

Question	Yes	No	N/A	Comments/Discrepancy
Chain of Custody Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
-Includes Date/Time/ID/Analysis Matrix: <u>w</u>				
All containers needing acid/base preservation have been checked?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. <u>HNO3 pH<2</u>
All containers needing preservation are found to be in compliance with EPA recommendation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>HCl pH<2</u>
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>H2SO4 pH<2</u>
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H2OH pH>12</u>
Samples checked for dechlorination?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H2OH/ZnOAc pH>9</u>
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
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: 6/20/16

Project Manager SRF Review: MS

Date: 6/20/16

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)

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. 92302019
 Reviewed By: _____

Page 1 of 1

Custody seal ID: 20160616-01

Sample Shipment Date:⁸ 6/16/16
 Sample Received Date:⁹ _____
 ¹² Standard Turnaround Time
 # 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 LF #4
 Account Number:⁶ _____
 Special Instructions:⁷ CCR + McIntosh #4 State GW

Sampled By:¹⁰ Myles Rogers
 Signature: *Sophanie Yum*
Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

LAB USE ONLY: ¹³ 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 G-Grab O-Other C-Composite Matrix Key: ²³ O-Oil S-Solid SL-Sludge W-Wipe SW-Surface Water GW-Ground Water WW-Wash Water DW-Drinking Water Preservative Key: ²⁴ H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfite P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved			
		Date	Time					HNO3 N	HNO3 N	Ice I	HNO3 N	HNO3 N	HNO3 N				
	GNC-23	6/16/16	13:01		G	GW	3	✓	✓	✓							
	GNC-22	6/16/16	09:56		G	GW	3	✓	✓	✓							
	FERR-2	6/16/16	16:30		G	DI	3	✓	✓	✓							

Handwritten notes in table:
 - Row 1: Radium 226 & 228 Ga Tech
 - Row 2: EPA 6020 & EPA 7470 (Attached), EPA 6020 & EPA 7470, EPA 6020 & EPA 7470, CI, F, SO4 EPA 300, TDS SM2540C
 - Row 3: EPA 6020 & EPA 7470, EPA 6020 & EPA 7470, EPA 6020 & EPA 7470, Metals app. III & IV
 - Column 15: Lab USE ONLY

LAB USE ONLY: Sample Receipt Information²⁵

Relinquished by:²⁶ [Signature] Date/Time 6/16/16 16:00
 Received by:²⁷ [Signature] Date/Time 6/16/16 16:25
 Relinquished by: _____ Date/Time _____
 Received by: Matt Stewart Date/Time 6/16/16 15:30
2:50
 *DI = Distilled Water

June 23, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302018

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 18, 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 LF #4

Pace Project No.: 92302018

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

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SAMPLE SUMMARY

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92302018001	GWC-19	Water	06/16/16 13:44	06/18/16 10:30
92302018002	GWC-20	Water	06/16/16 11:40	06/18/16 10:30
92302018003	DUP-2	Water	06/16/16 00:00	06/18/16 10:30
92302018004	GWC-10	Water	06/16/16 09:40	06/18/16 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92302018001	GWC-19	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302018002	GWC-20	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302018003	DUP-2	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A
92302018004	GWC-10	EPA 6020B	CDF	19	PASI-A
		EPA 7470	SER	1	PASI-A

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SUMMARY OF DETECTION

Project: PLANT MCINTOSH LF #4
Pace Project No.: 92302018

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92302018001	GWC-19					
EPA 6020B	Arsenic	0.00026J	mg/L	0.0050	06/21/16 18:12	
EPA 6020B	Barium	0.017	mg/L	0.010	06/21/16 18:12	
EPA 6020B	Beryllium	0.00011J	mg/L	0.0030	06/21/16 18:12	
EPA 6020B	Boron	0.0069J	mg/L	0.10	06/21/16 18:12	B
EPA 6020B	Cadmium	0.00018J	mg/L	0.0010	06/21/16 18:12	
EPA 6020B	Calcium	10.4	mg/L	0.50	06/21/16 18:12	
EPA 6020B	Chromium	0.0016J	mg/L	0.010	06/21/16 18:12	
EPA 6020B	Cobalt	0.000067J	mg/L	0.010	06/21/16 18:12	
EPA 6020B	Copper	0.00024J	mg/L	0.025	06/21/16 18:12	B
EPA 6020B	Lithium	0.0020J	mg/L	0.050	06/21/16 18:12	
EPA 6020B	Molybdenum	0.00043J	mg/L	0.010	06/21/16 18:12	
EPA 6020B	Nickel	0.0013J	mg/L	0.010	06/21/16 18:12	
EPA 6020B	Vanadium	0.00092J	mg/L	0.010	06/21/16 18:12	B
EPA 6020B	Zinc	0.0026J	mg/L	0.010	06/21/16 18:12	
92302018002	GWC-20					
EPA 6020B	Arsenic	0.00014J	mg/L	0.0050	06/21/16 18:16	
EPA 6020B	Barium	0.027	mg/L	0.010	06/21/16 18:16	
EPA 6020B	Beryllium	0.00032J	mg/L	0.0030	06/21/16 18:16	
EPA 6020B	Boron	0.012J	mg/L	0.10	06/21/16 18:16	
EPA 6020B	Cadmium	0.00044J	mg/L	0.0010	06/21/16 18:16	
EPA 6020B	Calcium	2.4	mg/L	0.50	06/21/16 18:16	
EPA 6020B	Chromium	0.00080J	mg/L	0.010	06/21/16 18:16	
EPA 6020B	Cobalt	0.0032J	mg/L	0.010	06/21/16 18:16	
EPA 6020B	Copper	0.00032J	mg/L	0.025	06/21/16 18:16	B
EPA 6020B	Lithium	0.0017J	mg/L	0.050	06/21/16 18:16	
EPA 6020B	Nickel	0.0030J	mg/L	0.010	06/21/16 18:16	
EPA 6020B	Thallium	0.000052J	mg/L	0.0010	06/21/16 18:16	
EPA 6020B	Vanadium	0.00054J	mg/L	0.010	06/21/16 18:16	B
EPA 6020B	Zinc	0.0048J	mg/L	0.010	06/21/16 18:16	
92302018003	DUP-2					
EPA 6020B	Barium	0.0086J	mg/L	0.010	06/21/16 18:31	
EPA 6020B	Boron	0.0015J	mg/L	0.10	06/21/16 18:31	B
EPA 6020B	Calcium	7.6	mg/L	0.50	06/21/16 18:31	
EPA 6020B	Chromium	0.0024J	mg/L	0.010	06/21/16 18:31	
EPA 6020B	Cobalt	0.000024J	mg/L	0.010	06/21/16 18:31	
EPA 6020B	Lithium	0.00026J	mg/L	0.050	06/21/16 18:31	B
EPA 6020B	Nickel	0.0013J	mg/L	0.010	06/21/16 18:31	
EPA 6020B	Vanadium	0.0038J	mg/L	0.010	06/21/16 18:31	
92302018004	GWC-10					
EPA 6020B	Arsenic	0.00040J	mg/L	0.0050	06/21/16 18:35	
EPA 6020B	Barium	0.022	mg/L	0.010	06/21/16 18:35	
EPA 6020B	Beryllium	0.000085J	mg/L	0.0030	06/21/16 18:35	
EPA 6020B	Boron	0.017J	mg/L	0.10	06/21/16 18:35	
EPA 6020B	Calcium	18.9	mg/L	0.50	06/21/16 18:35	
EPA 6020B	Chromium	0.0070J	mg/L	0.010	06/21/16 18:35	
EPA 6020B	Cobalt	0.000010J	mg/L	0.010	06/21/16 18:35	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92302018004	GWC-10					
EPA 6020B	Lithium	0.0052J	mg/L	0.050	06/21/16 18:35	
EPA 6020B	Molybdenum	0.00044J	mg/L	0.010	06/21/16 18:35	
EPA 6020B	Vanadium	0.0011J	mg/L	0.010	06/21/16 18:35	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Sample: GWC-19		Lab ID: 92302018001		Collected: 06/16/16 13:44	Received: 06/18/16 10:30	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	06/20/16 17:30	06/21/16 18:12	7440-36-0		
Arsenic	0.00026J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:12	7440-38-2		
Barium	0.017	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:12	7440-39-3		
Beryllium	0.00011J	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:12	7440-41-7		
Boron	0.0069J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:12	7440-42-8	B	
Cadmium	0.00018J	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:12	7440-43-9		
Calcium	10.4	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:12	7440-70-2		
Chromium	0.0016J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:12	7440-47-3		
Cobalt	0.000067J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:12	7440-48-4		
Copper	0.00024J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:12	7440-50-8	B	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:12	7439-92-1		
Lithium	0.0020J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:12	7439-93-2		
Molybdenum	0.00043J	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:12	7439-98-7		
Nickel	0.0013J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:12	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:12	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:12	7440-22-4		
Thallium	ND	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:12	7440-28-0		
Vanadium	0.00092J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:12	7440-62-2	B	
Zinc	0.0026J	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:12	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:27	7439-97-6		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Sample: GWC-20		Lab ID: 92302018002		Collected: 06/16/16 11:40		Received: 06/18/16 10:30		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	06/20/16 17:30	06/21/16 18:16	7440-36-0		
Arsenic	0.00014J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:16	7440-38-2		
Barium	0.027	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:16	7440-39-3		
Beryllium	0.00032J	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:16	7440-41-7		
Boron	0.012J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:16	7440-42-8		
Cadmium	0.00044J	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:16	7440-43-9		
Calcium	2.4	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:16	7440-70-2		
Chromium	0.00080J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:16	7440-47-3		
Cobalt	0.0032J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:16	7440-48-4		
Copper	0.00032J	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:16	7440-50-8	B	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:16	7439-92-1		
Lithium	0.0017J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:16	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:16	7439-98-7		
Nickel	0.0030J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:16	7440-02-0		
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:16	7782-49-2		
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:16	7440-22-4		
Thallium	0.000052J	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:16	7440-28-0		
Vanadium	0.00054J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:16	7440-62-2	B	
Zinc	0.0048J	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:16	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:29	7439-97-6		

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Sample: DUP-2 Lab ID: 92302018003 Collected: 06/16/16 00:00 Received: 06/18/16 10:30 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	06/20/16 17:30	06/21/16 18:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:31	7440-38-2	
Barium	0.0086J	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:31	7440-41-7	
Boron	0.0015J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:31	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:31	7440-43-9	
Calcium	7.6	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:31	7440-70-2	
Chromium	0.0024J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:31	7440-47-3	
Cobalt	0.000024J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:31	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:31	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:31	7439-92-1	
Lithium	0.00026J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:31	7439-93-2	B
Molybdenum	ND	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:31	7439-98-7	
Nickel	0.0013J	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:31	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:31	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:31	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:31	7440-28-0	
Vanadium	0.0038J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:31	7440-62-2	
Zinc	ND	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:31	7440-66-6	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:32	7439-97-6	

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Sample: GWC-10		Lab ID: 92302018004		Collected: 06/16/16 09:40		Received: 06/18/16 10:30		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	06/20/16 17:30	06/21/16 18:35	7440-36-0	
Arsenic	0.00040J	mg/L	0.0050	0.000050	1	06/20/16 17:30	06/21/16 18:35	7440-38-2	
Barium	0.022	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:35	7440-39-3	
Beryllium	0.000085J	mg/L	0.0030	0.000020	1	06/20/16 17:30	06/21/16 18:35	7440-41-7	
Boron	0.017J	mg/L	0.10	0.00057	1	06/20/16 17:30	06/21/16 18:35	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000060	1	06/20/16 17:30	06/21/16 18:35	7440-43-9	
Calcium	18.9	mg/L	0.50	0.10	1	06/20/16 17:30	06/21/16 18:35	7440-70-2	
Chromium	0.0070J	mg/L	0.010	0.00010	1	06/20/16 17:30	06/21/16 18:35	7440-47-3	
Cobalt	0.000010J	mg/L	0.010	0.000010	1	06/20/16 17:30	06/21/16 18:35	7440-48-4	
Copper	ND	mg/L	0.025	0.00012	1	06/20/16 17:30	06/21/16 18:35	7440-50-8	
Lead	ND	mg/L	0.0050	0.000080	1	06/20/16 17:30	06/21/16 18:35	7439-92-1	
Lithium	0.0052J	mg/L	0.050	0.000070	1	06/20/16 17:30	06/21/16 18:35	7439-93-2	
Molybdenum	0.00044J	mg/L	0.010	0.00011	1	06/20/16 17:30	06/21/16 18:35	7439-98-7	
Nickel	ND	mg/L	0.010	0.00045	1	06/20/16 17:30	06/21/16 18:35	7440-02-0	
Selenium	ND	mg/L	0.010	0.00032	1	06/20/16 17:30	06/21/16 18:35	7782-49-2	
Silver	ND	mg/L	0.010	0.000080	1	06/20/16 17:30	06/21/16 18:35	7440-22-4	
Thallium	ND	mg/L	0.0010	0.000020	1	06/20/16 17:30	06/21/16 18:35	7440-28-0	
Vanadium	0.0011J	mg/L	0.010	0.000070	1	06/20/16 17:30	06/21/16 18:35	7440-62-2	
Zinc	ND	mg/L	0.010	0.0024	1	06/20/16 17:30	06/21/16 18:35	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/21/16 13:35	06/22/16 15:35	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

QC Batch: MERP/9638

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 92302018001, 92302018002, 92302018003, 92302018004

METHOD BLANK: 1759560

Matrix: Water

Associated Lab Samples: 92302018001, 92302018002, 92302018003, 92302018004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/22/16 14:26	

LABORATORY CONTROL SAMPLE: 1759561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759562 1759563

Parameter	Units	92302013001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
Mercury	mg/L	ND	.0025	.0025	.0023	.0023	92	91	75-125	0	25			

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

QC Batch: MPRP/22098 Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A Analysis Description: 6020 MET

Associated Lab Samples: 92302018001, 92302018002, 92302018003, 92302018004

METHOD BLANK: 1759761

Matrix: Water

Associated Lab Samples: 92302018001, 92302018002, 92302018003, 92302018004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/21/16 16:31	
Arsenic	mg/L	ND	0.0050	0.000050	06/21/16 16:31	
Barium	mg/L	ND	0.010	0.00011	06/21/16 16:31	
Beryllium	mg/L	ND	0.0030	0.000020	06/21/16 16:31	
Boron	mg/L	0.0010J	0.10	0.00057	06/21/16 16:31	
Cadmium	mg/L	ND	0.0010	0.000060	06/21/16 16:31	
Calcium	mg/L	ND	0.50	0.10	06/21/16 16:31	
Chromium	mg/L	ND	0.010	0.00010	06/21/16 16:31	
Cobalt	mg/L	ND	0.010	0.000010	06/21/16 16:31	
Copper	mg/L	0.00022J	0.025	0.00012	06/21/16 16:31	
Lead	mg/L	ND	0.0050	0.000080	06/21/16 16:31	
Lithium	mg/L	0.00011J	0.050	0.000070	06/21/16 16:31	
Molybdenum	mg/L	ND	0.010	0.00011	06/21/16 16:31	
Nickel	mg/L	ND	0.010	0.00045	06/21/16 16:31	
Selenium	mg/L	ND	0.010	0.00032	06/21/16 16:31	
Silver	mg/L	ND	0.010	0.000080	06/21/16 16:31	
Thallium	mg/L	ND	0.0010	0.000020	06/21/16 16:31	
Vanadium	mg/L	0.000097J	0.010	0.000070	06/21/16 16:31	
Zinc	mg/L	ND	0.010	0.0024	06/21/16 16:31	

LABORATORY CONTROL SAMPLE: 1759762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.10	100	80-120	
Arsenic	mg/L	.1	0.097	97	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.10	100	80-120	
Boron	mg/L	.1	0.093J	93	80-120	
Cadmium	mg/L	.1	0.10	100	80-120	
Calcium	mg/L	1.2	1.3	102	80-120	
Chromium	mg/L	.1	0.10	102	80-120	
Cobalt	mg/L	.1	0.10	103	80-120	
Copper	mg/L	.1	0.10	101	80-120	
Lead	mg/L	.1	0.099	99	80-120	
Lithium	mg/L	.1	0.10	100	80-120	
Molybdenum	mg/L	.1	0.10	100	80-120	
Nickel	mg/L	.1	0.10	102	80-120	
Selenium	mg/L	.1	0.095	95	80-120	
Silver	mg/L	.1	0.10	105	80-120	
Thallium	mg/L	.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

LABORATORY CONTROL SAMPLE: 1759762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/L	.1	0.10	100	80-120	
Zinc	mg/L	.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759763 1759764

Parameter	Units	92302013001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.1	.1	0.099	0.099	99	99	75-125	0	20	
Arsenic	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	
Barium	mg/L	0.011	.1	.1	0.11	0.11	97	98	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.10	101	102	75-125	0	20	
Boron	mg/L	0.0013J	.1	.1	0.099J	0.099J	98	98	75-125	0	20	
Cadmium	mg/L	0.00017J	.1	.1	0.10	0.10	99	99	75-125	0	20	
Calcium	mg/L	14.3	1.2	1.2	15.4	15.6	83	101	75-125	1	20	
Chromium	mg/L	0.010	.1	.1	0.11	0.11	100	101	75-125	1	20	
Cobalt	mg/L	0.000070J	.1	.1	0.10	0.10	101	100	75-125	1	20	
Copper	mg/L	0.00030J	.1	.1	0.10	0.10	101	102	75-125	0	20	
Lead	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20	
Lithium	mg/L	0.000074J	.1	.1	0.10	0.099	102	99	75-125	3	20	
Molybdenum	mg/L	0.00016J	.1	.1	0.10	0.10	100	99	75-125	0	20	
Nickel	mg/L	ND	.1	.1	0.099	0.10	99	99	75-125	0	20	
Selenium	mg/L	ND	.1	.1	0.097	0.098	97	98	75-125	1	20	
Silver	mg/L	ND	.1	.1	0.10	0.10	102	102	75-125	0	20	
Thallium	mg/L	ND	.1	.1	0.10	0.10	100	101	75-125	1	20	
Vanadium	mg/L	0.010	.1	.1	0.11	0.11	99	98	75-125	1	20	
Zinc	mg/L	ND	.1	.1	0.10	0.10	98	98	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1759765 1759766

Parameter	Units	92302013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Antimony	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Arsenic	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20	
Barium	mg/L	ND	.1	.1	0.12	0.12	120	118	75-125	1	20	
Beryllium	mg/L	ND	.1	.1	0.10	0.099	102	99	75-125	3	20	
Boron	mg/L	ND	.1	.1	0.11	0.11	114	114	75-125	0	20	
Cadmium	mg/L	0.000088J	.1	.1	0.10	0.099	101	99	75-125	2	20	
Calcium	mg/L	ND	1.2	1.2	20.4	19.3	1630	1540	75-125	5	20	M1
Chromium	mg/L	0.0024J	.1	.1	0.11	0.10	105	103	75-125	3	20	
Cobalt	mg/L	0.000021J	.1	.1	0.10	0.098	100	98	75-125	3	20	
Copper	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Lead	mg/L	ND	.1	.1	0.098	0.096	98	96	75-125	2	20	
Lithium	mg/L	ND	.1	.1	0.11	0.11	107	106	75-125	1	20	
Molybdenum	mg/L	ND	.1	.1	0.10	0.10	102	100	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

Parameter	Units	1759765		1759766		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92302013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Nickel	mg/L	0.00065J	.1	.1	0.099	0.096	99	96	75-125	3	20	
Selenium	mg/L	ND	.1	.1	0.099	0.096	99	96	75-125	4	20	
Silver	mg/L	ND	.1	.1	0.10	0.10	104	101	75-125	2	20	
Thallium	mg/L	ND	.1	.1	0.10	0.098	100	98	75-125	2	20	
Vanadium	mg/L	0.00032J	.1	.1	0.10	0.098	100	98	75-125	3	20	
Zinc	mg/L	ND	.1	.1	0.099	0.098	98	97	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: PLANT MCINTOSH LF #4

Pace Project No.: 92302018

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 LF #4

Pace Project No.: 92302018

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92302018001	GWC-19	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302018002	GWC-20	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302018003	DUP-2	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302018004	GWC-10	EPA 3010A	MPRP/22098	EPA 6020B	ICPM/1327
92302018001	GWC-19	EPA 7470	MERP/9638	EPA 7470	MERC/9272
92302018002	GWC-20	EPA 7470	MERP/9638	EPA 7470	MERC/9272
92302018003	DUP-2	EPA 7470	MERP/9638	EPA 7470	MERC/9272
92302018004	GWC-10	EPA 7470	MERP/9638	EPA 7470	MERC/9272

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: Georgia Power Project #:

WO#: **92302018**



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

Custody Seal Present? Yes No Seals Intact? Yes No

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): 2.8 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 type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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>(u)</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 HCl pH<2 H2SO4 pH<2 NaOH pH>12 NaOH/ZnOAc pH>9
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
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: 6/20/16

Project Manager SRF Review: MS Date: 6/20/16

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)

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 ID: 20160616-02

LAB USE ONLY
 Work Order No. 92302018
 Reviewed By:
 Page 1 of 1

Sample Shipment Date: 6/16/16 Standard Turnaround Time

Sample Received Date: 6/16/16
 Sampled By: Tracy Wardell
 # of Business Days (Rush) (Must be cleared through Env. Lab. Prior to shipment)

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

Stephanie Sun
 Signature

Authorization to subcontract 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	Matrix	No. of Containers	ANALYSIS REQUESTED ²¹				PRESERVATIVE ²⁰	Sample Type Key: 22
		Date	Time					HNO3 N	HNO3 N	Ice I	HMO3 N		
	GWC-19	6/16/16	1344	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C	G	GW	3	✓	✓	✓	✓	001	
	GWC-20	6/16/16	1140	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C	G	GW	3	✓	✓	✓	✓	002	
	DUP-2	6/16/16	—	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C	G	GW	3	✓	✓	✓	✓	003	
	GWC-10	6/16/16	0940	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C	G	GW	3	✓	✓	✓	✓	004	
17 18 19 Matrix No. of Containers ANALYSIS REQUESTED ²¹ PRESERVATIVE ²⁰ HNO3 N HNO3 N Ice I HMO3 N Sample Type Matrix No. of Containers ANALYSIS REQUESTED ²¹ PRESERVATIVE ²⁰ HNO3 N HNO3 N Ice I HMO3 N Sample Type Key: 22 C-Grab O-Other C-Composite Matrix Key: 23 0-01 S-Solid S-Subst W-Wipe SW-Surface Water CW-Cond Water WW-Water Water DW-Drinking Water Preservative Key: 24 H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate P-Phosphoric Acid ST-Sodium Thiosulfate U-Untreated LAB USE ONLY ²⁵ Comments 001 002 003 004													

Relinquished by: Tracy Wardell Date/Time 6/16/16 19:00
 Received by: Stephanie Sun Date/Time 6/17/16 10:25
 Relinquished by: Date/Time
 Received by: Tracy Wardell Date/Time 6/18/16 10:30



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 LF #4
Pace Project No.: 30187128

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 20, 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 LF #4
Pace Project No.: 30187128

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 LF #4
Pace Project No.: 30187128

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187128001	GWC-18	Water	06/16/16 15:15	06/20/16 09:40
30187128002	GWC-21	Water	06/16/16 10:45	06/20/16 09:40
30187128003	FB-2	Water	06/16/16 16:20	06/20/16 09:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
 Pace Project No.: 30187128

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187128001	GWC-18	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187128002	GWC-21	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187128003	FB-2	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 LF #4
 Pace Project No.: 30187128

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-18		Lab ID: 30187128001	Collected: 06/16/16 15:15	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	0.296 ± 0.146 (0.210) C:90% T:NA	pCi/L	07/18/16 09:14	13982-63-3		
Radium-228	EPA 9320	0.779 ± 0.377 (0.650) C:71% T:92%	pCi/L	07/15/16 00:12	15262-20-1		
Total Radium	Total Radium Calculation	1.08 ± 0.523 (0.860)	pCi/L	07/18/16 13:18	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: GWC-21		Lab ID: 30187128002	Collected: 06/16/16 10:45	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	0.357 ± 0.155 (0.197) C:89% T:NA	pCi/L	07/18/16 09:14	13982-63-3		
Radium-228	EPA 9320	0.351 ± 0.292 (0.572) C:78% T:94%	pCi/L	07/15/16 00:12	15262-20-1		
Total Radium	Total Radium Calculation	0.708 ± 0.447 (0.769)	pCi/L	07/18/16 13:18	7440-14-4		

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-2		Lab ID: 30187128003	Collected: 06/16/16 16:20	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Radium-226	EPA 9315	0.137 ± 0.111 (0.206) C:96% T:NA	pCi/L	07/18/16 09:14	13982-63-3		
Radium-228	EPA 9320	0.433 ± 0.345 (0.676) C:78% T:87%	pCi/L	07/15/16 00:12	15262-20-1		
Total Radium	Total Radium Calculation	0.570 ± 0.456 (0.882)	pCi/L	07/18/16 13:18	7440-14-4		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30187128

QC Batch: 225789 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30187128001, 30187128002, 30187128003

METHOD BLANK: 1106278 Matrix: Water
 Associated Lab Samples: 30187128001, 30187128002, 30187128003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.0541 (0.148) C:95% T:NA	pCi/L	07/18/16 09:12	

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 LF #4
 Pace Project No.: 30187128

QC Batch: 225696 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30187128001, 30187128002, 30187128003

METHOD BLANK: 1105637 Matrix: Water
 Associated Lab Samples: 30187128001, 30187128002, 30187128003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.297 ± 0.401 (0.831) C:69% T:70%	pCi/L	07/15/16 00:16	

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 LF #4
Pace Project No.: 30187128

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
30187128

LAB USE ONLY
 Work Order No.
 Reviewed By:
 Page 1 of 1

Sample Shipment Date:⁸ 10/16/16
 Sample Received Date:⁹ 10/16/16
 12 Standard Turnaround Time

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

Sampled By:¹⁰ **Amarda Stormer**
 Myles Rogers

Stephanie Run
 Signature

Authorization to subcontract 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	Matrix	No. of Containers	ANALYSIS REQUESTED ²¹				PRESERVATIVE ²⁰				Sample Type Key: 22										
		Date	Time					HNO3 N	HNO3 N	Ice	HMOS M	HMOS N	M N	M N	C Composite											
	GWC-18	10/16/16	15:15		G	GW	3	Metals app. III & IV EPA 6020 & EPA 7470 McIntosh #4 State GW (Attached) EPA 6020 & EPA 7470 CI, F, SO4 EPA 300 TDS SM2540C	✓	✓	✓	✓	✓	✓												
	GWC-21	10/16/16	10:45		G	GW	3		✓	✓	✓	✓	✓	✓												
	FB-2	10/16/16	16:20		G	DI	3		✓	✓	✓	✓	✓	✓												

WO#: 30187128



30187128

Relinquished by:²⁶ *J. Ward* Date/Time: 10/16/16 19:00
 Received by:²⁷ *Amarda Stormer* Date/Time: 10/16/16 18:35
 Relinquished by:
 Received by:²⁸ *Amarda Stormer* Date/Time: 10/16/16 18:40

*DI = Distilled Water

Site Specific State GW Analyte List

Additional to CCR

Analytes	Plant McIntosh # 4
Ag	*
Cu	*
Ni	*
V	*
Zn	*

Sample Condition Upon Receipt Pittsburgh

30187128



Client Name: Georgia Power

Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7765 5157 3501

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: KA 6/20/16

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: -Includes date/time/ID/Analysis Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
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: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
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>KA</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



Test: Ra-228
Analyst: JLLW
Date: 7/12/2016
Worklist: 30278
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1105637
MB Concentration:	0.297
M/B Counting Uncertainty:	0.398
MB MDC:	0.831
MB Numerical Performance Indicator:	1.46
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS/D (Y or N)?	
Count Date:	7/15/2016	LCS30278	Y
Spike I.D.:	15-018	LCS30278	Y
Spike Concentration (pCi/mL):	23.361		
Volume Used (mL):	0.20		
Aliquot Volume (L, g, F):	0.816		
Target Conc. (pCi/L, g, F):	5.726		
Uncertainty (Calculated):	0.229		
Result (pCi/L, g, F):	5.886		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.656		
Numerical Performance Indicator:	102.79%		
Percent Recovery:	0.45		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		

Duplicate Sample Assessment	
Sample I.D.:	LCS30278
Duplicate Sample I.D.:	LCS30278
Sample Result (pCi/L, g, F):	5.886
Sample Duplicate Result (pCi/L, g, F):	0.656
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	5.468
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	7.37%
Duplicate RPD:	0.885
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

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):	
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:	
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:	
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:	

Quality Control Sample Performance Assessment



Analyst. Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30291
Matrix: DW

Method Blank Assessment

MB Sample ID: 1106278
MB concentration: 0.000
MB Counting Uncertainty: 0.054
MB MDC: 0.148
MB Numerical Performance Indicator: 0.00
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count Date:	Count	Y
7/18/2016	LCS30291	7/18/2016
16-001	16-001	16-001
47.784	47.784	47.784
0.10	0.10	0.10
0.501	0.500	0.500
9.545	9.555	9.555
0.449	0.449	0.449
7.686	8.177	8.177
0.560	0.582	0.582
-5.05	-3.67	-3.67
80.63%	85.57%	85.57%
N/A	N/A	N/A
Pass	Pass	Pass

Duplicate Sample Assessment

Sample I.D.:	Duplicate Sample I.D.:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Are sample and/or duplicate results below MDC?	Duplicate Numerical Performance Indicator:	Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:
LCS30291	LCS30291	7.696	7.696	NO	-1.166	6.06%	N/A	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.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (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 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:
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.:

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:

Calabu



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 LF #4
Pace Project No.: 30187130

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 20, 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 LF #4
Pace Project No.: 30187130

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4
Pace Project No.: 30187130

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187130001	GWC-23	Water	06/16/16 13:01	06/20/16 09:40
30187130002	GWC-22	Water	06/16/16 09:56	06/20/16 09:40
30187130003	FERB-2	Water	06/16/16 16:30	06/20/16 09:40

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
Pace Project No.: 30187130

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187130001	GWC-23	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187130002	GWC-22	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187130003	FERB-2	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 LF #4
 Pace Project No.: 30187130

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.186 ± 0.127 (0.221) C:90% T:NA	pCi/L	07/18/16 09:14	13982-63-3	
Radium-228		EPA 9320	0.734 ± 0.354 (0.610) C:77% T:92%	pCi/L	07/15/16 00:13	15262-20-1	
Total Radium		Total Radium Calculation	0.920 ± 0.481 (0.831)	pCi/L	07/18/16 13:18	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.435 ± 0.163 (0.180) C:91% T:NA	pCi/L	07/18/16 09:15	13982-63-3	
Radium-228		EPA 9320	1.10 ± 0.425 (0.659) C:71% T:92%	pCi/L	07/15/16 00:13	15262-20-1	
Total Radium		Total Radium Calculation	1.54 ± 0.588 (0.839)	pCi/L	07/18/16 13:18	7440-14-4	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226		EPA 9315	0.00708 ± 0.0848 (0.211) C:95% T:NA	pCi/L	07/18/16 09:15	13982-63-3	
Radium-228		EPA 9320	0.0888 ± 0.304 (0.658) C:72% T:90%	pCi/L	07/15/16 00:13	15262-20-1	
Total Radium		Total Radium Calculation	0.0959 ± 0.389 (0.869)	pCi/L	07/18/16 13:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30187130

QC Batch: 225789 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30187130001, 30187130002, 30187130003

METHOD BLANK: 1106278 Matrix: Water
 Associated Lab Samples: 30187130001, 30187130002, 30187130003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.0541 (0.148) C:95% T:NA	pCi/L	07/18/16 09:12	

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30187130

QC Batch: 225696 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30187130001, 30187130002, 30187130003

METHOD BLANK: 1105637 Matrix: Water
 Associated Lab Samples: 30187130001, 30187130002, 30187130003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.297 ± 0.401 (0.831) C:69% T:70%	pCi/L	07/15/16 00:16	

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.

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QUALIFIERS

Project: Plant McIntosh LF #4
Pace Project No.: 30187130

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

LAB USE ONLY
 Work Order No. _____
 Reviewed By: _____

Custody seal ID: 20160616-01
30187130

Page 1 of 1

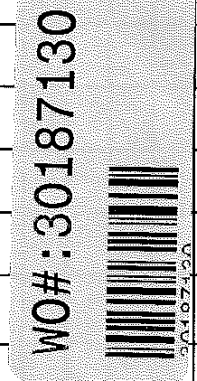
Sample Shipment Date: 8/16/16
 Sample Received Date: 8/16/16
 Standard Turnaround Time

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

Sampled By: Myles Rogers
 # of Business Days (Rush) _____
 (Must be cleared through Env. Lab. Prior to shipment)

PRESERVATIVE		ANALYSIS REQUESTED		Sample Type Key: 22	
HNO3	HNO3	Ice	HNO3	G-Grab	O-Other
N	N	I	N	S-Solid	C-Composite
				SW-Surface Water	W-Wipe
				WW-Waste Water	GM-Ground Water
				DW-Drinking Water	

LAB USE ONLY	LAB ID	Sample Number	Collection Date	Collection Time	Sample Description	Sample Type	Matrix	No. of Containers	Matrix Key: 23	Preservative Key: 24	Comments
		GWC-23	8/16/16	13:01		G	GW	3	S-Solid SW-Surface Water WW-Waste Water	H-Hydrochloric Acid I-Ionic S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate ST-Sodium Thiosulfate	001
		GWC-22	8/16/16	09:56		G	GW	3	S-Solid SW-Surface Water WW-Waste Water	H-Hydrochloric Acid I-Ionic S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate ST-Sodium Thiosulfate	002
		FERB-2	8/16/16	16:30		G	DI	3	S-Solid SW-Surface Water WW-Waste Water	H-Hydrochloric Acid I-Ionic S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate ST-Sodium Thiosulfate	003



LAB USE ONLY	LAB USE ONLY
Relinquished by:	Date/Time: 8/16/16 12:00
Received by:	Date/Time: 8/16/16 10:25
Relinquished by:	Date/Time:
Received by:	Date/Time: 8/16/16 09:40

*DI = Distilled Water

30187130

Site Specific State GW Analyte List

Additional to CCR

Analytes	Plant McIntosh # 4
Ag	*
Cu	*
Ni	*
V	*
Zn	*

Sample Condition Upon Receipt Pittsburgh

30187130



Client Name: Georgia Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7705 5157 3501

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: KA 6/20/16

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>WT</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>KA</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"/>	

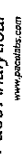
Client Notification/ Resolution:

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.pacean.com

Test: Ra-228
Analyst: JLLW
Date: 7/12/2016
Worklist: 30278
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1105637
MB concentration:	0.297
M/B Counting Uncertainty:	0.398
MB MDC:	0.831
MB Numerical Performance Indicator:	1.46
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS(Y or N)?	Y
LCS ID:	LCS0278
Count Date:	7/15/2016
Spike I.D.:	15-018
Spike Concentration (pCi/mL):	23.361
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.816
Target Conc. (pCi/L, g, F):	5.726
Uncertainty (Calculated):	0.229
Result (pCi/L, g, F):	5.885
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.655
Numerical Performance Indicator:	0.45
Percent Recovery:	102.79%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS30278
Duplicate Sample I.D.:	LCS0278
Sample Result (pCi/L, g, F):	5.886
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.656
Sample Duplicate Result (pCi/L, g, F):	5.468
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.654
Ave sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	0.885
Duplicate RPD:	7.37%
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.

Comments:

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):	
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 Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
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.:	
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 Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30291
Matrix: DW

Method Blank Assessment	
MB Sample ID	1106278
MB Concentration:	0.000
MB Counting Uncertainty:	0.054
MB MDC:	0.148
MB Numerical Performance Indicator:	0.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	7/18/2016
Spike I.D.:	16-001
Spike Concentration (pCi/mL):	47.784
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.501
Target Conc. (pCi/L, g, F):	9.545
Uncertainty (Calculated):	0.449
Result (pCi/L, g, F):	7.696
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.560
Numerical Performance Indicator:	-3.67
Percent Recovery:	80.63%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS30291
Duplicate Sample I.D.:	LCS30291
Sample Result (pCi/L, g, F):	7.696
Sample Duplicate Result (pCi/L, g, F):	0.560
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	8.177
Sample Duplicate Result Uncertainty (pCi/L, g, F):	0.582
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-1.166
Duplicate RPD:	6.06%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

TAR DW GC
Printed: 7/19/2016 1:17 PM

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 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:	
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:	



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 LF #4
Pace Project No.: 30187131

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 20, 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 LF #4
Pace Project No.: 30187131

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

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SAMPLE SUMMARY

Project: Plant McIntosh LF #4
Pace Project No.: 30187131

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187131001	GWC-19	Water	06/16/16 13:44	06/20/16 09:40
30187131002	GWC-20	Water	06/16/16 11:40	06/20/16 09:40
30187131003	DUP-2	Water	06/16/16 00:01	06/20/16 09:40
30187131004	GWC-10	Water	06/16/16 09:40	06/20/16 09:40

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh LF #4
 Pace Project No.: 30187131

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187131001	GWC-19	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187131002	GWC-20	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187131003	DUP-2	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187131004	GWC-10	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 LF #4
 Pace Project No.: 30187131

Sample: GWC-19		Lab ID: 30187131001	Collected: 06/16/16 13:44	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.143 ± 0.0975 (0.159)		pCi/L	07/18/16 09:15	13982-63-3	
		C:96% T:NA					
Radium-228	EPA 9320	0.522 ± 0.369 (0.708)		pCi/L	07/15/16 00:13	15262-20-1	
		C:75% T:88%					
Total Radium	Total Radium Calculation	0.665 ± 0.467 (0.867)		pCi/L	07/18/16 13:18	7440-14-4	

Sample: GWC-20		Lab ID: 30187131002	Collected: 06/16/16 11:40	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.229 ± 0.119 (0.169)		pCi/L	07/18/16 09:15	13982-63-3	
		C:94% T:NA					
Radium-228	EPA 9320	0.406 ± 0.317 (0.614)		pCi/L	07/15/16 00:13	15262-20-1	
		C:76% T:90%					
Total Radium	Total Radium Calculation	0.635 ± 0.436 (0.783)		pCi/L	07/18/16 13:18	7440-14-4	

Sample: DUP-2		Lab ID: 30187131003	Collected: 06/16/16 00:01	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	-0.00959 ± 0.0981 (0.252)		pCi/L	07/18/16 09:15	13982-63-3	
		C:97% T:NA					
Radium-228	EPA 9320	0.396 ± 0.314 (0.612)		pCi/L	07/15/16 00:13	15262-20-1	
		C:78% T:90%					
Total Radium	Total Radium Calculation	0.386 ± 0.412 (0.864)		pCi/L	07/18/16 13:18	7440-14-4	

Sample: GWC-10		Lab ID: 30187131004	Collected: 06/16/16 09:40	Received: 06/20/16 09:40	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.189 ± 0.110 (0.165)		pCi/L	07/18/16 09:15	13982-63-3	
		C:93% T:NA					
Radium-228	EPA 9320	0.687 ± 0.368 (0.657)		pCi/L	07/15/16 00:13	15262-20-1	
		C:76% T:88%					
Total Radium	Total Radium Calculation	0.876 ± 0.478 (0.822)		pCi/L	07/18/16 13:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh LF #4
 Pace Project No.: 30187131

QC Batch: 225789 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30187131001, 30187131002, 30187131003, 30187131004

METHOD BLANK: 1106278 Matrix: Water
 Associated Lab Samples: 30187131001, 30187131002, 30187131003, 30187131004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.0541 (0.148) C:95% T:NA	pCi/L	07/18/16 09:12	

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 LF #4
Pace Project No.: 30187131

QC Batch: 225696 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 30187131001, 30187131002, 30187131003, 30187131004

METHOD BLANK: 1105637 Matrix: Water
Associated Lab Samples: 30187131001, 30187131002, 30187131003, 30187131004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.297 ± 0.401 (0.831) C:69% T:70%	pCi/L	07/15/16 00:16	

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 LF #4
Pace Project No.: 30187131

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 ID: 20160616-02

LAB USE ONLY
 Work Order No. _____
 Reviewed By: _____
 Page 1 of 1


Sample Shipment Date:⁸ 6/16/16
 Sample Received Date:⁹ _____
 Sampled By:¹⁰ Tracy Wardell
 # of Business Days (Rush) _____
 (Must be cleared through Env. Lab. Prior to shipment)

X ¹² Standard Time 30187131

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 CCR + McIntosh #4 State GW

Signature: Supriya Sun
 Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

LAB USE ONLY ¹³ 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			Matrix Key: ²³	Preservative Key: ²⁴	
		Date	Time					EPA 6020 & EPA 7470 (Attached)	McIntosh #4 State GW EPA 8020 & EPA 7470	Metals app. III & IV	HNO3 N	HNO3 N	Ice	HNO3 N	HNO3 N	G-Grab	O-Other			C-Composite
	GWC-19	6/16/16	1344		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	001
	GWC-20	6/16/16	1140		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	002
	DUP-2	6/16/16	-		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	003
	GWC-10	6/16/16	0940		G	GW	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	004

WO#: 30187131


LAB USE ONLY - Sample Receipt Information ²⁵

Relinquished by:²⁶ Tracy Wardell Date/Time: 6/16/16 1900
 Received by:²⁷ Supriya Sun Date/Time: 6/17/16 1025
 Relinquished by:²⁸ Tracy Wardell Date/Time: 6/20/16 0940
 Received by:²⁹ _____ Date/Time: _____

Site Specific State GW Analyte List
 Additional to CCR

Analytes	Plant McIntosh # 4
Ag	*
Cu	*
Ni	*
V	*
Zn	*

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power

Project # 30187131

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7765 5157 3501

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: GA 6/20/16

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: -Includes date/time/ID/Analysis Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
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>GA</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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30278
Matrix: DW



Method Blank Assessment

MB Sample ID: 1105637
MB concentration: 0.297
M/B Counting Uncertainty: 0.398
MB MDC: 0.831
MB Numerical Performance Indicator: 1.46
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count Date:	LCS D (Y or N)?
7/15/2016	LCS D30278
7/15/2016	Y
15-018	15-018
23-361	23-361
0.20	0.20
0.816	0.811
5.725	5.759
0.229	0.230
5.886	5.468
0.656	0.654
102.79%	-0.82
N/A	94.94%
Pass	N/A

Count Date: 7/15/2016
Spike I.D.: 15-018
Spike Concentration (pCi/mL): 23.361
Volume Used (mL): 0.20
Aliquot Volume (L, g, F): 0.816
Target Conc. (pCi/L, g, F): 5.725
Uncertainty (Calculated): 0.229
Result (pCi/L, g, F): 5.886
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.656
Numerical Performance Indicator: 102.79%
Percent Recovery: 0.45
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.:	Sample I.D.:
LCS30278	LCS30278
5.886	5.886
0.656	0.656
0.654	0.654
NO	NO
0.865	0.865
7.37%	7.37%
N/A	N/A
Pass	Pass

Sample I.D.: LCS30278
Duplicate Sample I.D.: LCS30278
Sample Result (pCi/L, g, F): 5.886
Sample Result Counting Uncertainty (pCi/L, g, F): 0.656
Sample Duplicate Result (pCi/L, g, F): 5.468
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.654
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: 0.865
Duplicate RPD: 7.37%
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.:

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):
MSD Aliquot (L, g, F):
MS Target Conc. (pCi/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 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.:

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:

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

[Handwritten Signature]

Comments:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Quality Control Sample Performance Assessment



Test: Ra-226
Analyst: RMK
Date: 7/15/2016
Worklist: 30291
Matrix: DW

Method Blank Assessment	
MB Sample ID	1106278
MB concentration:	0.000
M/B Counting Uncertainty:	0.054
MB MDC:	0.148
MB Numerical Performance Indicator:	0.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Spike 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
Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	MS Numerical Performance Indicator:
MS Numerical Performance Indicator:	MS Percent Recovery:
MS Percent Recovery:	MSD Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MS Status vs Recovery:	MS Status vs Recovery:
MSD Status vs Recovery:	MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS/MSD Duplicate RPD:
Duplicate Numerical Performance Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS30291	7/18/2016
Count Date:	16-001
Spike I.D.:	47.784
Spike Concentration (pCi/mL):	0.10
Volume Used (mL):	0.501
Aliquot Volume (L, g, F):	9.545
Target Conc. (pCi/L, g, F):	0.449
Uncertainty (Calculated):	8.177
Result (pCi/L, g, F):	0.582
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	-3.67
Numerical Performance Indicator:	85.57%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass

Duplicate Sample Assessment	
Sample I.D.:	LCS30291
Duplicate Sample I.D.:	7.686
Sample Result Counting Uncertainty (pCi/L, g, F):	0.560
Sample Duplicate Result (pCi/L, g, F):	8.177
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.582
Are sample and/or duplicate results below MDC?	NO
Duplicate Numerical Performance Indicator:	-1.166
Duplicate Status vs Numerical Indicator:	6.06%
Duplicate Status vs RPD:	N/A
Duplicate Status vs Recovery:	Pass

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

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: 400-125635-1

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

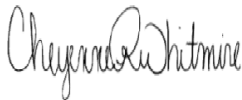
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

8/25/2016 5:08:00 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Job ID: 400-125635-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-125635-1

HPLC/IC

Method(s) 300.0: The matrix spike (MS) recoveries for analytical batch 318983 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Metals

Method(s) 6020: The matrix spike duplicate (MSD) recoveries for preparation batch 318480 and analytical batch 318871 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The initial calibration verification (ICV) result and/or %RSD for batch 318871 was above the upper control limit for Cadmium and Selenium. Sample results were below the reporting limit, and have been reported as qualified data.

Method(s) 6020: The method blank for preparation batch 318615 and analytical batch 319047 contained Barium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 7470A: The method blank for prep batch 318218 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

Method(s) 7470A: The method blank for prep batch 318491 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 318803 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Detection Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-3

Lab Sample ID: 400-125635-1

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
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.71		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00042	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00010	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-14

Lab Sample ID: 400-125635-2

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
Sulfate	2.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.39		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00045	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-125635-3

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
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00062	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00010	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-16

Lab Sample ID: 400-125635-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.0		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.19	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00010	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2

Lab Sample ID: 400-125635-5

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-2 (Continued)

Lab Sample ID: 400-125635-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.1		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.032		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.24	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-15

Lab Sample ID: 400-125635-6

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
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.21	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-125635-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.1		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.032		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.23	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-125635-8

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
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.14	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00041	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-17

Lab Sample ID: 400-125635-9

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-17 (Continued)

Lab Sample ID: 400-125635-9

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	0.16	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00054	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00046	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0020	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00069	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-125635-10

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	0.96	J	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	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-12

Lab Sample ID: 400-125635-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.0094		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.45		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-125635-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.42		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.5		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-11 (Continued)

Lab Sample ID: 400-125635-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0052		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0042	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00053	J ^	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-10

Lab Sample ID: 400-125635-13

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
Fluoride	0.21		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.9		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	13		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0056		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0055		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J ^	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-125635-14

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	1.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.13	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00060	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-21

Lab Sample ID: 400-125635-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-21 (Continued)

Lab Sample ID: 400-125635-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.99		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0015	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: GWC-20

Lab Sample ID: 400-125635-16

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	2.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-125635-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.2		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	2.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	6.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-23

Lab Sample ID: 400-125635-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.072		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0051		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.00089	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: FB-1

Lab Sample ID: 400-125635-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000090	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-125635-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00039	J ^	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-125635-21

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	2.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00035	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00035	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0026		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4R

Lab Sample ID: 400-125635-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.7		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	0.024	B	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0046		0.0025	0.00040	mg/L	5		6020	Total Recoverable

Client Sample ID: GWC-22

Lab Sample ID: 400-125635-23

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	0.24		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
Arsenic	0.00082	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.047	B	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00059	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWC-22 (Continued)

Lab Sample ID: 400-125635-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	14		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-18

Lab Sample ID: 400-125635-24

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	0.74		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.0		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0010	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.023	B	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	18		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0023	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Thallium	0.00011	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-2

Lab Sample ID: 400-125635-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-2

Lab Sample ID: 400-125635-26

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: 400-125635-1
SDG: LF #4

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: 400-125635-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-125635-1	GWA-3	Water	08/09/16 09:59	08/10/16 08:00
400-125635-2	GWA-14	Water	08/09/16 12:45	08/10/16 08:00
400-125635-3	GWA-5	Water	08/09/16 10:25	08/10/16 08:00
400-125635-4	GWA-16	Water	08/09/16 13:47	08/10/16 08:00
400-125635-5	GWA-2	Water	08/09/16 10:10	08/10/16 08:00
400-125635-6	GWA-15	Water	08/09/16 12:12	08/10/16 08:00
400-125635-7	DUP-1	Water	08/09/16 00:00	08/10/16 08:00
400-125635-8	GWA-13	Water	08/09/16 12:35	08/10/16 08:00
400-125635-9	GWC-17	Water	08/09/16 14:35	08/10/16 08:00
400-125635-10	GWC-1	Water	08/10/16 09:30	08/11/16 08:05
400-125635-11	GWC-12	Water	08/10/16 10:40	08/11/16 08:05
400-125635-12	GWC-11	Water	08/10/16 11:35	08/11/16 08:05
400-125635-13	GWC-10	Water	08/10/16 11:05	08/11/16 08:05
400-125635-14	GWC-9	Water	08/10/16 14:00	08/11/16 08:05
400-125635-15	GWC-21	Water	08/10/16 12:55	08/11/16 08:05
400-125635-16	GWC-20	Water	08/10/16 12:40	08/11/16 08:05
400-125635-17	GWC-19	Water	08/10/16 17:25	08/11/16 08:05
400-125635-18	GWC-23	Water	08/10/16 16:05	08/11/16 08:05
400-125635-19	FB-1	Water	08/10/16 16:00	08/11/16 08:05
400-125635-20	FERB-1	Water	08/10/16 16:15	08/11/16 08:05
400-125635-21	DUP-2	Water	08/10/16 00:00	08/11/16 08:05
400-125635-22	GWA-4R	Water	08/11/16 09:20	08/12/16 13:45
400-125635-23	GWC-22	Water	08/11/16 08:40	08/12/16 13:45
400-125635-24	GWC-18	Water	08/11/16 10:15	08/12/16 13:45
400-125635-25	FB-2	Water	08/11/16 07:45	08/12/16 13:45
400-125635-26	FERB-2	Water	08/11/16 10:30	08/12/16 13:45

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 08/09/16 09:59
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-1
Matrix: Water

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			08/16/16 16:37	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 16:37	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 16:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 18:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 18:35	5
Barium	0.023		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 18:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:35	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 18:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:35	5
Calcium	0.71		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 18:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 18:35	5
Cobalt	0.00042	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 18:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 18:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 18:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 18:35	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 18:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 18:35	5

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		08/12/16 08:52	08/15/16 09:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWA-14
Date Collected: 08/09/16 12:45
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-2
Matrix: Water

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			08/16/16 17:47	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 17:47	1
Sulfate	2.7		1.0	0.70	mg/L			08/16/16 17:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 18:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 18:40	5
Barium	0.011		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 18:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:40	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 18:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:40	5
Calcium	0.39		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 18:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 18:40	5
Cobalt	0.00045	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 18:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 18:40	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 18:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 18:40	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 18:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 18:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		08/12/16 08:52	08/15/16 09:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWA-5
Date Collected: 08/09/16 10:25
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-3
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			08/16/16 18:55	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 18:55	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 18:55	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		08/13/16 11:53	08/16/16 18:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 18:44	5
Barium	0.035		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 18:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:44	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 18:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:44	5
Calcium	2.0		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 18:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 18:44	5
Cobalt	0.00062	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 18:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 18:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 18:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 18:44	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 18:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 18:44	5

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		08/12/16 08:52	08/15/16 09:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-16

Date Collected: 08/09/16 13:47

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.0	0.89	mg/L			08/16/16 19:18	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 19:18	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 19:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 18:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 18:49	5
Barium	0.023		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 18:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:49	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 18:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:49	5
Calcium	0.19	J	0.25	0.13	mg/L		08/13/16 11:53	08/16/16 18:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 18:49	5
Cobalt	0.00055	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 18:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 18:49	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 18:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 18:49	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 18:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 18:49	5

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		08/12/16 08:52	08/15/16 09:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 08/09/16 10:10
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.0	0.89	mg/L			08/16/16 19:41	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 19:41	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 19:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 18:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 18:53	5
Barium	0.032		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 18:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:53	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 18:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:53	5
Calcium	0.24	J	0.25	0.13	mg/L		08/13/16 11:53	08/16/16 18:53	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 18:53	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 18:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 18:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 18:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 18:53	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 18:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 18:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/12/16 08:52	08/15/16 09:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-15
Date Collected: 08/09/16 12:12
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-6
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			08/16/16 20:04	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 20:04	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 18:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 18:58	5
Barium	0.023		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 18:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:58	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 18:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 18:58	5
Calcium	0.21	J	0.25	0.13	mg/L		08/13/16 11:53	08/16/16 18:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 18:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 18:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 18:58	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 18:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 18:58	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 18:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 18:58	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/12/16 08:52	08/15/16 09:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 08/09/16 00:00
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.0	0.89	mg/L			08/16/16 20:27	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 20:27	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 20:27	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		08/13/16 11:53	08/16/16 19:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:02	5
Barium	0.032		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:02	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:02	5
Calcium	0.23	J	0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:02	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:02	5
Cobalt	0.0013	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:02	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:02	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/12/16 08:52	08/15/16 09:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWA-13
Date Collected: 08/09/16 12:35
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-8
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			08/16/16 20:49	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 20:49	1
Sulfate	<0.70	F1	1.0	0.70	mg/L			08/16/16 20:49	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		08/13/16 11:53	08/16/16 19:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:07	5
Barium	0.013		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:07	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:07	5
Calcium	0.14	J	0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:07	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:07	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:07	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:07	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		08/12/16 08:52	08/15/16 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-17

Date Collected: 08/09/16 14:35

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-9

Matrix: Water

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			08/16/16 21:35	1
Fluoride	0.16	J	0.20	0.082	mg/L			08/16/16 21:35	1
Sulfate	1.6		1.0	0.70	mg/L			08/16/16 21:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 19:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:11	5
Barium	0.018		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:11	5
Beryllium	0.00054	J	0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:11	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:11	5
Cadmium	0.00046	J	0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:11	5
Calcium	1.8		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:11	5
Chromium	0.0020	J	0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:11	5
Cobalt	0.00069	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:11	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:11	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/12/16 08:52	08/15/16 10:30	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			08/11/16 17:20	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-1
Date Collected: 08/10/16 09:30
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-10
Matrix: Water

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			08/16/16 21:58	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 21:58	1
Sulfate	0.96	J	1.0	0.70	mg/L			08/16/16 21:58	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		08/13/16 11:53	08/16/16 19:29	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:29	5
Barium	0.042		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:29	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:29	5
Calcium	2.1		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:29	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:29	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:29	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:29	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWC-12
Date Collected: 08/10/16 10:40
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-11
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.8		1.0	0.89	mg/L			08/16/16 22:21	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 22:21	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 22:21	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		08/13/16 11:53	08/16/16 19:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:34	5
Barium	0.0094		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:34	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:34	5
Calcium	0.45		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:34	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:34	5
Cobalt	0.00052	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:34	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-11

Date Collected: 08/10/16 11:35

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-12

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.0	0.89	mg/L			08/16/16 23:29	1
Fluoride	0.42		0.20	0.082	mg/L			08/16/16 23:29	1
Sulfate	4.5		1.0	0.70	mg/L			08/16/16 23:29	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		08/13/16 11:53	08/16/16 19:38	5
Arsenic	0.0013		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:38	5
Barium	0.010		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:38	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:38	5
Calcium	7.6		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:38	5
Chromium	0.0052		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:38	5
Lithium	0.0042	J	0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:38	5
Selenium	0.00053	J ^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWC-10

Date Collected: 08/10/16 11:05

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-13

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			08/16/16 23:52	1
Fluoride	0.21		0.20	0.082	mg/L			08/16/16 23:52	1
Sulfate	2.9		1.0	0.70	mg/L			08/16/16 23:52	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		08/13/16 11:53	08/16/16 19:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:43	5
Barium	0.015		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:43	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:43	5
Calcium	13		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:43	5
Chromium	0.0056		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:43	5
Lithium	0.0055		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:43	5
Selenium	0.00026	J ^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-9
Date Collected: 08/10/16 14:00
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-14
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			08/17/16 00:15	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 00:15	1
Sulfate	1.6		1.0	0.70	mg/L			08/17/16 00:15	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		08/13/16 11:53	08/16/16 19:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:47	5
Barium	0.031		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:47	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:47	5
Calcium	0.13	J	0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:47	5
Cobalt	0.00060	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:47	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWC-21
Date Collected: 08/10/16 12:55
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-15
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.89	mg/L			08/17/16 00:38	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 00:38	1
Sulfate	1.1		1.0	0.70	mg/L			08/17/16 00:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 19:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:52	5
Barium	0.014		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:52	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:52	5
Calcium	0.99		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:52	5
Cobalt	0.0015	J	0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:52	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-20
Date Collected: 08/10/16 12:40
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-16
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			08/17/16 01:00	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 01:00	1
Sulfate	2.8		1.0	0.70	mg/L			08/17/16 01:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 19:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 19:56	5
Barium	0.025		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 19:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:56	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 19:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 19:56	5
Calcium	1.4		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 19:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 19:56	5
Cobalt	0.0025		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 19:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 19:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 19:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 19:56	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 19:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 19:56	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-19

Date Collected: 08/10/16 17:25

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-17

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.2		1.0	0.89	mg/L			08/17/16 02:55	1
Fluoride	0.14	J	0.20	0.082	mg/L			08/17/16 02:55	1
Sulfate	2.7		1.0	0.70	mg/L			08/17/16 02:55	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		08/13/16 11:53	08/16/16 20:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 20:01	5
Barium	0.013		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 20:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 20:01	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 20:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 20:01	5
Calcium	6.7		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 20:01	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 20:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 20:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 20:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 20:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 20:01	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 20:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 20:01	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Client Sample ID: GWC-23

Date Collected: 08/10/16 16:05

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-18

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			08/17/16 04:49	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 04:49	1
Sulfate	3.1		1.0	0.70	mg/L			08/17/16 04:49	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		08/13/16 11:53	08/16/16 20:05	5
Arsenic	0.0021		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 20:05	5
Barium	0.072		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 20:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 20:05	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 20:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 20:05	5
Calcium	10		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 20:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 20:05	5
Cobalt	0.0051		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 20:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 20:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 20:05	5
Molybdenum	0.00089	J	0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 20:05	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 20:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 20:05	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: FB-1
Date Collected: 08/10/16 16:00
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-19
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/17/16 05:11	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 05:11	1
Sulfate	<0.70		1.0	0.70	mg/L			08/17/16 05:11	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		08/13/16 11:53	08/16/16 20:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 20:10	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 20:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 20:10	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 20:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 20:10	5
Calcium	<0.13		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 20:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 20:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 20:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 20:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 20:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 20:10	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 20:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 20:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000090	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 12:58	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			08/13/16 15:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: FERB-1

Date Collected: 08/10/16 16:15

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-20

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/17/16 05:34	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 05:34	1
Sulfate	<0.70		1.0	0.70	mg/L			08/17/16 05:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	F1	0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 17:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 17:59	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 17:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 17:59	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 17:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 17:59	5
Calcium	<0.13		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 17:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 17:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 17:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 17:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 17:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 17:59	5
Selenium	0.00039	J ^	0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 17:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 17:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 13:00	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			08/13/16 16:16	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: DUP-2

Date Collected: 08/10/16 00:00

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-21

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			08/17/16 05:57	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 05:57	1
Sulfate	2.8		1.0	0.70	mg/L			08/17/16 05:57	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		08/14/16 11:48	08/16/16 20:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/14/16 11:48	08/16/16 20:32	5
Barium	0.025		0.0025	0.00049	mg/L		08/14/16 11:48	08/16/16 20:32	5
Beryllium	0.00035	J	0.0025	0.00034	mg/L		08/14/16 11:48	08/16/16 20:32	5
Boron	<0.021		0.050	0.021	mg/L		08/14/16 11:48	08/16/16 20:32	5
Cadmium	0.00035	J	0.0025	0.00034	mg/L		08/14/16 11:48	08/16/16 20:32	5
Calcium	1.5		0.25	0.13	mg/L		08/14/16 11:48	08/16/16 20:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/14/16 11:48	08/16/16 20:32	5
Cobalt	0.0026		0.0025	0.00040	mg/L		08/14/16 11:48	08/16/16 20:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/14/16 11:48	08/16/16 20:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/14/16 11:48	08/16/16 20:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/14/16 11:48	08/16/16 20:32	5
Selenium	<0.00024	[^]	0.0013	0.00024	mg/L		08/14/16 11:48	08/16/16 20:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/14/16 11:48	08/16/16 20:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		08/13/16 13:20	08/15/16 13:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			08/13/16 16:16	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-4R

Lab Sample ID: 400-125635-22

Date Collected: 08/11/16 09:20

Matrix: Water

Date Received: 08/12/16 13:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			08/17/16 06:20	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 06:20	1
Sulfate	3.7		1.0	0.70	mg/L			08/17/16 06:20	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		08/15/16 13:50	08/17/16 19:33	5
Arsenic	0.00096	J	0.0013	0.00046	mg/L		08/15/16 13:50	08/17/16 19:33	5
Barium	0.024	B	0.0025	0.00049	mg/L		08/15/16 13:50	08/17/16 19:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/17/16 19:33	5
Calcium	1.9		0.25	0.13	mg/L		08/15/16 13:50	08/17/16 19:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/15/16 13:50	08/17/16 19:33	5
Cobalt	0.0046		0.0025	0.00040	mg/L		08/15/16 13:50	08/17/16 19:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/15/16 13:50	08/17/16 19:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/15/16 13:50	08/17/16 19:33	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/15/16 13:50	08/17/16 19:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/15/16 13:50	08/17/16 19:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/19/16 13:10	5
Boron	<0.021		0.050	0.021	mg/L		08/15/16 13:50	08/19/16 13:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/15/16 13:50	08/19/16 13:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/15/16 12:13	08/16/16 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			08/17/16 16:42	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-22

Date Collected: 08/11/16 08:40

Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-23

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			08/17/16 06:43	1
Fluoride	0.24		0.20	0.082	mg/L			08/17/16 06:43	1
Sulfate	7.5		1.0	0.70	mg/L			08/17/16 06:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/15/16 13:50	08/17/16 19:38	5
Arsenic	0.00082	J	0.0013	0.00046	mg/L		08/15/16 13:50	08/17/16 19:38	5
Barium	0.047	B	0.0025	0.00049	mg/L		08/15/16 13:50	08/17/16 19:38	5
Cadmium	0.00059	J	0.0025	0.00034	mg/L		08/15/16 13:50	08/17/16 19:38	5
Calcium	14		0.25	0.13	mg/L		08/15/16 13:50	08/17/16 19:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/15/16 13:50	08/17/16 19:38	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		08/15/16 13:50	08/17/16 19:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/15/16 13:50	08/17/16 19:38	5
Molybdenum	0.0014	J	0.015	0.00085	mg/L		08/15/16 13:50	08/17/16 19:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/15/16 13:50	08/17/16 19:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/15/16 13:50	08/17/16 19:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/19/16 13:15	5
Boron	<0.021		0.050	0.021	mg/L		08/15/16 13:50	08/19/16 13:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/15/16 13:50	08/19/16 13:15	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/15/16 12:13	08/16/16 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		5.0	3.4	mg/L			08/17/16 16:42	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 08/11/16 10:15

Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-24

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			08/17/16 07:06	1
Fluoride	0.74		0.20	0.082	mg/L			08/17/16 07:06	1
Sulfate	5.0		1.0	0.70	mg/L			08/17/16 07:06	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		08/15/16 13:50	08/17/16 19:42	5
Arsenic	0.0010	J	0.0013	0.00046	mg/L		08/15/16 13:50	08/17/16 19:42	5
Barium	0.023	B	0.0025	0.00049	mg/L		08/15/16 13:50	08/17/16 19:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/17/16 19:42	5
Calcium	18		0.25	0.13	mg/L		08/15/16 13:50	08/17/16 19:42	5
Chromium	0.0023	J	0.0025	0.0011	mg/L		08/15/16 13:50	08/17/16 19:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/15/16 13:50	08/17/16 19:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/15/16 13:50	08/17/16 19:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/15/16 13:50	08/17/16 19:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/15/16 13:50	08/17/16 19:42	5
Thallium	0.00011	J	0.00050	0.000085	mg/L		08/15/16 13:50	08/17/16 19:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/19/16 13:19	5
Boron	<0.021		0.050	0.021	mg/L		08/15/16 13:50	08/19/16 13:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/15/16 13:50	08/19/16 13:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/15/16 12:13	08/16/16 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			08/17/16 16:42	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: FB-2

Date Collected: 08/11/16 07:45

Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-25

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			08/17/16 07:28	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 07:28	1
Sulfate	<0.70		1.0	0.70	mg/L			08/17/16 07:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/15/16 13:50	08/17/16 19:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/15/16 13:50	08/17/16 19:47	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/15/16 13:50	08/17/16 19:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/17/16 19:47	5
Calcium	<0.13		0.25	0.13	mg/L		08/15/16 13:50	08/17/16 19:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/15/16 13:50	08/17/16 19:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/15/16 13:50	08/17/16 19:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/15/16 13:50	08/17/16 19:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/15/16 13:50	08/17/16 19:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/15/16 13:50	08/17/16 19:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/15/16 13:50	08/17/16 19:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/19/16 13:24	5
Boron	<0.021		0.050	0.021	mg/L		08/15/16 13:50	08/19/16 13:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/15/16 13:50	08/19/16 13:24	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		08/15/16 12:13	08/16/16 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			08/17/16 16:42	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: FERB-2

Date Collected: 08/11/16 10:30

Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-26

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			08/17/16 08:37	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 08:37	1
Sulfate	<0.70		1.0	0.70	mg/L			08/17/16 08:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/15/16 13:50	08/17/16 19:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/15/16 13:50	08/17/16 19:51	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/15/16 13:50	08/17/16 19:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/17/16 19:51	5
Calcium	<0.13		0.25	0.13	mg/L		08/15/16 13:50	08/17/16 19:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/15/16 13:50	08/17/16 19:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/15/16 13:50	08/17/16 19:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/15/16 13:50	08/17/16 19:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/15/16 13:50	08/17/16 19:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/15/16 13:50	08/17/16 19:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/15/16 13:50	08/17/16 19:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/19/16 13:28	5
Boron	<0.021		0.050	0.021	mg/L		08/15/16 13:50	08/19/16 13:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/15/16 13:50	08/19/16 13:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/15/16 12:13	08/16/16 13:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			08/17/16 16:42	1

Definitions/Glossary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-3

Date Collected: 08/09/16 09:59

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 16:37	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 18:35	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: GWA-14

Date Collected: 08/09/16 12:45

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 17:47	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 18:40	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: GWA-5

Date Collected: 08/09/16 10:25

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 18:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 18:44	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: GWA-16

Date Collected: 08/09/16 13:47

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 19:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 18:49	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 08/09/16 10:10

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 19:41	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 18:53	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: GWA-15

Date Collected: 08/09/16 12:12

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 20:04	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 18:58	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: DUP-1

Date Collected: 08/09/16 00:00

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 20:27	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:02	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 09:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: GWA-13

Date Collected: 08/09/16 12:35

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 20:49	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:07	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 10:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-17

Lab Sample ID: 400-125635-9

Date Collected: 08/09/16 14:35

Matrix: Water

Date Received: 08/10/16 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 21:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:11	RJB	TAL PEN
Total/NA	Prep	7470A			318218	08/12/16 08:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 10:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318272	08/11/16 17:20	TET	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-125635-10

Date Collected: 08/10/16 09:30

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 21:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:29	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: GWC-12

Lab Sample ID: 400-125635-11

Date Collected: 08/10/16 10:40

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 22:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:34	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: GWC-11

Lab Sample ID: 400-125635-12

Date Collected: 08/10/16 11:35

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 23:29	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:38	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-10

Lab Sample ID: 400-125635-13

Date Collected: 08/10/16 11:05

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/16/16 23:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:43	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: GWC-9

Lab Sample ID: 400-125635-14

Date Collected: 08/10/16 14:00

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/17/16 00:15	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:47	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: GWC-21

Lab Sample ID: 400-125635-15

Date Collected: 08/10/16 12:55

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/17/16 00:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:52	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: GWC-20

Lab Sample ID: 400-125635-16

Date Collected: 08/10/16 12:40

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	318983	08/17/16 01:00	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 19:56	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-125635-17

Date Collected: 08/10/16 17:25

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 02:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 20:01	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: GWC-23

Lab Sample ID: 400-125635-18

Date Collected: 08/10/16 16:05

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 04:49	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 20:05	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-125635-19

Date Collected: 08/10/16 16:00

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 05:11	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 20:10	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 12:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318486	08/13/16 15:18	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-125635-20

Date Collected: 08/10/16 16:15

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 05:34	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318480	08/13/16 11:53	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 17:59	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 13:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318488	08/13/16 16:16	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: DUP-2

Lab Sample ID: 400-125635-21

Date Collected: 08/10/16 00:00

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 05:57	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318505	08/14/16 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	318871	08/16/16 20:32	RJB	TAL PEN
Total/NA	Prep	7470A			318491	08/13/16 13:20	DN1	TAL PEN
Total/NA	Analysis	7470A		1	318616	08/15/16 13:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318488	08/13/16 16:16	TET	TAL PEN

Client Sample ID: GWA-4R

Lab Sample ID: 400-125635-22

Date Collected: 08/11/16 09:20

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 06:20	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319047	08/17/16 19:33	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	319499	08/19/16 13:10	RJB	TAL PEN
Total/NA	Prep	7470A			318606	08/15/16 12:13	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318803	08/16/16 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318950	08/17/16 16:42	TET	TAL PEN

Client Sample ID: GWC-22

Lab Sample ID: 400-125635-23

Date Collected: 08/11/16 08:40

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 06:43	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319047	08/17/16 19:38	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	319499	08/19/16 13:15	RJB	TAL PEN
Total/NA	Prep	7470A			318606	08/15/16 12:13	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318803	08/16/16 13:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318950	08/17/16 16:42	TET	TAL PEN

Client Sample ID: GWC-18

Lab Sample ID: 400-125635-24

Date Collected: 08/11/16 10:15

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 07:06	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318615	08/15/16 13:50	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Client Sample ID: GWC-18

Lab Sample ID: 400-125635-24

Date Collected: 08/11/16 10:15

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	319047	08/17/16 19:42	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	319499	08/19/16 13:19	RJB	TAL PEN
Total/NA	Prep	7470A			318606	08/15/16 12:13	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318803	08/16/16 13:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318950	08/17/16 16:42	TET	TAL PEN

Client Sample ID: FB-2

Lab Sample ID: 400-125635-25

Date Collected: 08/11/16 07:45

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 07:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319047	08/17/16 19:47	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	319499	08/19/16 13:24	RJB	TAL PEN
Total/NA	Prep	7470A			318606	08/15/16 12:13	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318803	08/16/16 13:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318950	08/17/16 16:42	TET	TAL PEN

Client Sample ID: FERB-2

Lab Sample ID: 400-125635-26

Date Collected: 08/11/16 10:30

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319036	08/17/16 08:37	TAJ	TAL PEN
Total Recoverable	Prep	3005A			318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319047	08/17/16 19:51	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		318615	08/15/16 13:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	319499	08/19/16 13:28	RJB	TAL PEN
Total/NA	Prep	7470A			318606	08/15/16 12:13	JAP	TAL PEN
Total/NA	Analysis	7470A		1	318803	08/16/16 13:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	318950	08/17/16 16:42	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: 400-125635-1
SDG: LF #4

HPLC/IC

Analysis Batch: 318983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total/NA	Water	300.0	
400-125635-2	GWA-14	Total/NA	Water	300.0	
400-125635-3	GWA-5	Total/NA	Water	300.0	
400-125635-4	GWA-16	Total/NA	Water	300.0	
400-125635-5	GWA-2	Total/NA	Water	300.0	
400-125635-6	GWA-15	Total/NA	Water	300.0	
400-125635-7	DUP-1	Total/NA	Water	300.0	
400-125635-8	GWA-13	Total/NA	Water	300.0	
400-125635-9	GWC-17	Total/NA	Water	300.0	
400-125635-10	GWC-1	Total/NA	Water	300.0	
400-125635-11	GWC-12	Total/NA	Water	300.0	
400-125635-12	GWC-11	Total/NA	Water	300.0	
400-125635-13	GWC-10	Total/NA	Water	300.0	
400-125635-14	GWC-9	Total/NA	Water	300.0	
400-125635-15	GWC-21	Total/NA	Water	300.0	
400-125635-16	GWC-20	Total/NA	Water	300.0	
MB 400-318983/4	Method Blank	Total/NA	Water	300.0	
LCS 400-318983/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-318983/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-125635-1 MS	GWA-3	Total/NA	Water	300.0	
400-125635-1 MSD	GWA-3	Total/NA	Water	300.0	
400-125635-8 MS	GWA-13	Total/NA	Water	300.0	

Analysis Batch: 319036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-17	GWC-19	Total/NA	Water	300.0	
400-125635-18	GWC-23	Total/NA	Water	300.0	
400-125635-19	FB-1	Total/NA	Water	300.0	
400-125635-20	FERB-1	Total/NA	Water	300.0	
400-125635-21	DUP-2	Total/NA	Water	300.0	
400-125635-22	GWA-4R	Total/NA	Water	300.0	
400-125635-23	GWC-22	Total/NA	Water	300.0	
400-125635-24	GWC-18	Total/NA	Water	300.0	
400-125635-25	FB-2	Total/NA	Water	300.0	
400-125635-26	FERB-2	Total/NA	Water	300.0	
MB 400-319036/35	Method Blank	Total/NA	Water	300.0	
LCS 400-319036/36	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-319036/37	Lab Control Sample Dup	Total/NA	Water	300.0	
400-125635-17 MS	GWC-19	Total/NA	Water	300.0	
400-125635-17 MSD	GWC-19	Total/NA	Water	300.0	

Metals

Prep Batch: 318218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total/NA	Water	7470A	
400-125635-2	GWA-14	Total/NA	Water	7470A	
400-125635-3	GWA-5	Total/NA	Water	7470A	
400-125635-4	GWA-16	Total/NA	Water	7470A	
400-125635-5	GWA-2	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Metals (Continued)

Prep Batch: 318218 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-6	GWA-15	Total/NA	Water	7470A	
400-125635-7	DUP-1	Total/NA	Water	7470A	
400-125635-8	GWA-13	Total/NA	Water	7470A	
400-125635-9	GWC-17	Total/NA	Water	7470A	
MB 400-318218/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-318218/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-125662-B-10-B MS	Matrix Spike	Total/NA	Water	7470A	
400-125662-B-10-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 318480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total Recoverable	Water	3005A	
400-125635-2	GWA-14	Total Recoverable	Water	3005A	
400-125635-3	GWA-5	Total Recoverable	Water	3005A	
400-125635-4	GWA-16	Total Recoverable	Water	3005A	
400-125635-5	GWA-2	Total Recoverable	Water	3005A	
400-125635-6	GWA-15	Total Recoverable	Water	3005A	
400-125635-7	DUP-1	Total Recoverable	Water	3005A	
400-125635-8	GWA-13	Total Recoverable	Water	3005A	
400-125635-9	GWC-17	Total Recoverable	Water	3005A	
400-125635-10	GWC-1	Total Recoverable	Water	3005A	
400-125635-11	GWC-12	Total Recoverable	Water	3005A	
400-125635-12	GWC-11	Total Recoverable	Water	3005A	
400-125635-13	GWC-10	Total Recoverable	Water	3005A	
400-125635-14	GWC-9	Total Recoverable	Water	3005A	
400-125635-15	GWC-21	Total Recoverable	Water	3005A	
400-125635-16	GWC-20	Total Recoverable	Water	3005A	
400-125635-17	GWC-19	Total Recoverable	Water	3005A	
400-125635-18	GWC-23	Total Recoverable	Water	3005A	
400-125635-19	FB-1	Total Recoverable	Water	3005A	
400-125635-20	FERB-1	Total Recoverable	Water	3005A	
MB 400-318480/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-318480/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-125635-20 MS	FERB-1	Total Recoverable	Water	3005A	
400-125635-20 MSD	FERB-1	Total Recoverable	Water	3005A	

Prep Batch: 318491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-10	GWC-1	Total/NA	Water	7470A	
400-125635-11	GWC-12	Total/NA	Water	7470A	
400-125635-12	GWC-11	Total/NA	Water	7470A	
400-125635-13	GWC-10	Total/NA	Water	7470A	
400-125635-14	GWC-9	Total/NA	Water	7470A	
400-125635-15	GWC-21	Total/NA	Water	7470A	
400-125635-16	GWC-20	Total/NA	Water	7470A	
400-125635-17	GWC-19	Total/NA	Water	7470A	
400-125635-18	GWC-23	Total/NA	Water	7470A	
400-125635-19	FB-1	Total/NA	Water	7470A	
400-125635-20	FERB-1	Total/NA	Water	7470A	
400-125635-21	DUP-2	Total/NA	Water	7470A	
MB 400-318491/14-A	Method Blank	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Metals (Continued)

Prep Batch: 318491 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-318491/15-A	Lab Control Sample	Total/NA	Water	7470A	
680-128593-D-2-B MS	Matrix Spike	Total/NA	Water	7470A	
680-128593-D-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 318505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-21	DUP-2	Total Recoverable	Water	3005A	
MB 400-318505/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-318505/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-125635-21 MS	DUP-2	Total Recoverable	Water	3005A	
400-125635-21 MSD	DUP-2	Total Recoverable	Water	3005A	

Prep Batch: 318606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-22	GWA-4R	Total/NA	Water	7470A	
400-125635-23	GWC-22	Total/NA	Water	7470A	
400-125635-24	GWC-18	Total/NA	Water	7470A	
400-125635-25	FB-2	Total/NA	Water	7470A	
400-125635-26	FERB-2	Total/NA	Water	7470A	
MB 400-318606/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-318606/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-125840-B-8-B MS	Matrix Spike	Total/NA	Water	7470A	
400-125840-B-8-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 318615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-22 - RA	GWA-4R	Total Recoverable	Water	3005A	
400-125635-22	GWA-4R	Total Recoverable	Water	3005A	
400-125635-23 - RA	GWC-22	Total Recoverable	Water	3005A	
400-125635-23	GWC-22	Total Recoverable	Water	3005A	
400-125635-24	GWC-18	Total Recoverable	Water	3005A	
400-125635-24 - RA	GWC-18	Total Recoverable	Water	3005A	
400-125635-25 - RA	FB-2	Total Recoverable	Water	3005A	
400-125635-25	FB-2	Total Recoverable	Water	3005A	
400-125635-26	FERB-2	Total Recoverable	Water	3005A	
400-125635-26 - RA	FERB-2	Total Recoverable	Water	3005A	
MB 400-318615/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-318615/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-125806-B-1-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-125806-B-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 318616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total/NA	Water	7470A	318218
400-125635-2	GWA-14	Total/NA	Water	7470A	318218
400-125635-3	GWA-5	Total/NA	Water	7470A	318218
400-125635-4	GWA-16	Total/NA	Water	7470A	318218
400-125635-5	GWA-2	Total/NA	Water	7470A	318218
400-125635-6	GWA-15	Total/NA	Water	7470A	318218
400-125635-7	DUP-1	Total/NA	Water	7470A	318218
400-125635-8	GWA-13	Total/NA	Water	7470A	318218

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Metals (Continued)

Analysis Batch: 318616 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-9	GWC-17	Total/NA	Water	7470A	318218
400-125635-10	GWC-1	Total/NA	Water	7470A	318491
400-125635-11	GWC-12	Total/NA	Water	7470A	318491
400-125635-12	GWC-11	Total/NA	Water	7470A	318491
400-125635-13	GWC-10	Total/NA	Water	7470A	318491
400-125635-14	GWC-9	Total/NA	Water	7470A	318491
400-125635-15	GWC-21	Total/NA	Water	7470A	318491
400-125635-16	GWC-20	Total/NA	Water	7470A	318491
400-125635-17	GWC-19	Total/NA	Water	7470A	318491
400-125635-18	GWC-23	Total/NA	Water	7470A	318491
400-125635-19	FB-1	Total/NA	Water	7470A	318491
400-125635-20	FERB-1	Total/NA	Water	7470A	318491
400-125635-21	DUP-2	Total/NA	Water	7470A	318491
MB 400-318218/14-A	Method Blank	Total/NA	Water	7470A	318218
MB 400-318491/14-A	Method Blank	Total/NA	Water	7470A	318491
LCS 400-318218/15-A	Lab Control Sample	Total/NA	Water	7470A	318218
LCS 400-318491/15-A	Lab Control Sample	Total/NA	Water	7470A	318491
400-125662-B-10-B MS	Matrix Spike	Total/NA	Water	7470A	318218
400-125662-B-10-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	318218
680-128593-D-2-B MS	Matrix Spike	Total/NA	Water	7470A	318491
680-128593-D-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	318491

Analysis Batch: 318803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-22	GWA-4R	Total/NA	Water	7470A	318606
400-125635-23	GWC-22	Total/NA	Water	7470A	318606
400-125635-24	GWC-18	Total/NA	Water	7470A	318606
400-125635-25	FB-2	Total/NA	Water	7470A	318606
400-125635-26	FERB-2	Total/NA	Water	7470A	318606
MB 400-318606/14-A	Method Blank	Total/NA	Water	7470A	318606
LCS 400-318606/15-A	Lab Control Sample	Total/NA	Water	7470A	318606
400-125840-B-8-B MS	Matrix Spike	Total/NA	Water	7470A	318606
400-125840-B-8-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	318606

Analysis Batch: 318871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total Recoverable	Water	6020	318480
400-125635-2	GWA-14	Total Recoverable	Water	6020	318480
400-125635-3	GWA-5	Total Recoverable	Water	6020	318480
400-125635-4	GWA-16	Total Recoverable	Water	6020	318480
400-125635-5	GWA-2	Total Recoverable	Water	6020	318480
400-125635-6	GWA-15	Total Recoverable	Water	6020	318480
400-125635-7	DUP-1	Total Recoverable	Water	6020	318480
400-125635-8	GWA-13	Total Recoverable	Water	6020	318480
400-125635-9	GWC-17	Total Recoverable	Water	6020	318480
400-125635-10	GWC-1	Total Recoverable	Water	6020	318480
400-125635-11	GWC-12	Total Recoverable	Water	6020	318480
400-125635-12	GWC-11	Total Recoverable	Water	6020	318480
400-125635-13	GWC-10	Total Recoverable	Water	6020	318480
400-125635-14	GWC-9	Total Recoverable	Water	6020	318480
400-125635-15	GWC-21	Total Recoverable	Water	6020	318480

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Metals (Continued)

Analysis Batch: 318871 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-16	GWC-20	Total Recoverable	Water	6020	318480
400-125635-17	GWC-19	Total Recoverable	Water	6020	318480
400-125635-18	GWC-23	Total Recoverable	Water	6020	318480
400-125635-19	FB-1	Total Recoverable	Water	6020	318480
400-125635-20	FERB-1	Total Recoverable	Water	6020	318480
400-125635-21	DUP-2	Total Recoverable	Water	6020	318505
MB 400-318480/1-A ^5	Method Blank	Total Recoverable	Water	6020	318480
MB 400-318505/1-A ^5	Method Blank	Total Recoverable	Water	6020	318505
LCS 400-318480/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	318480
LCS 400-318505/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	318505
400-125635-20 MS	FERB-1	Total Recoverable	Water	6020	318480
400-125635-20 MSD	FERB-1	Total Recoverable	Water	6020	318480
400-125635-21 MS	DUP-2	Total Recoverable	Water	6020	318505
400-125635-21 MSD	DUP-2	Total Recoverable	Water	6020	318505

Analysis Batch: 319047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-22	GWA-4R	Total Recoverable	Water	6020	318615
400-125635-23	GWC-22	Total Recoverable	Water	6020	318615
400-125635-24	GWC-18	Total Recoverable	Water	6020	318615
400-125635-25	FB-2	Total Recoverable	Water	6020	318615
400-125635-26	FERB-2	Total Recoverable	Water	6020	318615
MB 400-318615/1-A ^5	Method Blank	Total Recoverable	Water	6020	318615
LCS 400-318615/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	318615
400-125806-B-1-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	318615
400-125806-B-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	318615

Analysis Batch: 319499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-22 - RA	GWA-4R	Total Recoverable	Water	6020	318615
400-125635-23 - RA	GWC-22	Total Recoverable	Water	6020	318615
400-125635-24 - RA	GWC-18	Total Recoverable	Water	6020	318615
400-125635-25 - RA	FB-2	Total Recoverable	Water	6020	318615
400-125635-26 - RA	FERB-2	Total Recoverable	Water	6020	318615
MB 400-318615/1-A ^5	Method Blank	Total Recoverable	Water	6020	318615
LCS 400-318615/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	318615
400-125806-B-1-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	318615
400-125806-B-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	318615

General Chemistry

Analysis Batch: 318272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total/NA	Water	SM 2540C	
400-125635-2	GWA-14	Total/NA	Water	SM 2540C	
400-125635-3	GWA-5	Total/NA	Water	SM 2540C	
400-125635-4	GWA-16	Total/NA	Water	SM 2540C	
400-125635-5	GWA-2	Total/NA	Water	SM 2540C	
400-125635-6	GWA-15	Total/NA	Water	SM 2540C	
400-125635-7	DUP-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

General Chemistry (Continued)

Analysis Batch: 318272 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-8	GWA-13	Total/NA	Water	SM 2540C	
400-125635-9	GWC-17	Total/NA	Water	SM 2540C	
MB 400-318272/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-318272/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-125635-1 DU	GWA-3	Total/NA	Water	SM 2540C	

Analysis Batch: 318486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-10	GWC-1	Total/NA	Water	SM 2540C	
400-125635-11	GWC-12	Total/NA	Water	SM 2540C	
400-125635-12	GWC-11	Total/NA	Water	SM 2540C	
400-125635-13	GWC-10	Total/NA	Water	SM 2540C	
400-125635-14	GWC-9	Total/NA	Water	SM 2540C	
400-125635-15	GWC-21	Total/NA	Water	SM 2540C	
400-125635-16	GWC-20	Total/NA	Water	SM 2540C	
400-125635-17	GWC-19	Total/NA	Water	SM 2540C	
400-125635-18	GWC-23	Total/NA	Water	SM 2540C	
400-125635-19	FB-1	Total/NA	Water	SM 2540C	
MB 400-318486/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-318486/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-125635-10 DU	GWC-1	Total/NA	Water	SM 2540C	
400-125635-16 DU	GWC-20	Total/NA	Water	SM 2540C	

Analysis Batch: 318488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-20	FERB-1	Total/NA	Water	SM 2540C	
400-125635-21	DUP-2	Total/NA	Water	SM 2540C	
MB 400-318488/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-318488/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-125730-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 318950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-22	GWA-4R	Total/NA	Water	SM 2540C	
400-125635-23	GWC-22	Total/NA	Water	SM 2540C	
400-125635-24	GWC-18	Total/NA	Water	SM 2540C	
400-125635-25	FB-2	Total/NA	Water	SM 2540C	
400-125635-26	FERB-2	Total/NA	Water	SM 2540C	
MB 400-318950/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-318950/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-125635-24 DU	GWC-18	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-318983/4
Matrix: Water
Analysis Batch: 318983

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/16/16 14:01	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/16 14:01	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/16 14:01	1

Lab Sample ID: LCS 400-318983/5
Matrix: Water
Analysis Batch: 318983

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.96		mg/L		100	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	9.89		mg/L		99	90 - 110

Lab Sample ID: LCSD 400-318983/6
Matrix: Water
Analysis Batch: 318983

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	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	9.94		mg/L		99	90 - 110	1	15

Lab Sample ID: 400-125635-1 MS
Matrix: Water
Analysis Batch: 318983

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.6		10.0	19.0		mg/L		104	80 - 120
Fluoride	<0.082		10.0	10.8		mg/L		108	80 - 120
Sulfate	<0.70		10.0	10.9		mg/L		109	80 - 120

Lab Sample ID: 400-125635-1 MSD
Matrix: Water
Analysis Batch: 318983

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.6		10.0	19.0		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	11.0		mg/L		110	80 - 120	1	20

Lab Sample ID: 400-125635-8 MS
Matrix: Water
Analysis Batch: 318983

Client Sample ID: GWA-13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.7		10.0	15.4		mg/L		117	80 - 120
Fluoride	<0.082		10.0	11.9		mg/L		119	80 - 120
Sulfate	<0.70	F1	10.0	12.4	F1	mg/L		124	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 400-319036/35
Matrix: Water
Analysis Batch: 319036

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			08/17/16 01:46	1
Fluoride	<0.082		0.20	0.082	mg/L			08/17/16 01:46	1
Sulfate	<0.70		1.0	0.70	mg/L			08/17/16 01:46	1

Lab Sample ID: LCS 400-319036/36
Matrix: Water
Analysis Batch: 319036

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	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 400-319036/37
Matrix: Water
Analysis Batch: 319036

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	0	15
Fluoride	10.0	10.5		mg/L		105	90 - 110	2	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	1	15

Lab Sample ID: 400-125635-17 MS
Matrix: Water
Analysis Batch: 319036

Client Sample ID: GWC-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.2		10.0	16.4		mg/L		102	80 - 120
Fluoride	0.14	J	10.0	10.8		mg/L		107	80 - 120
Sulfate	2.7		10.0	13.2		mg/L		105	80 - 120

Lab Sample ID: 400-125635-17 MSD
Matrix: Water
Analysis Batch: 319036

Client Sample ID: GWC-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.2		10.0	16.4		mg/L		102	80 - 120	0	20
Fluoride	0.14	J	10.0	10.8		mg/L		107	80 - 120	0	20
Sulfate	2.7		10.0	13.1		mg/L		105	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-318480/1-A ^5
Matrix: Water
Analysis Batch: 318871

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/13/16 11:53	08/16/16 17:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/13/16 11:53	08/16/16 17:50	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: MB 400-318480/1-A ^5
Matrix: Water
Analysis Batch: 318871

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318480

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.00049		0.0025	0.00049	mg/L		08/13/16 11:53	08/16/16 17:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 17:50	5
Boron	<0.021		0.050	0.021	mg/L		08/13/16 11:53	08/16/16 17:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/13/16 11:53	08/16/16 17:50	5
Calcium	<0.13		0.25	0.13	mg/L		08/13/16 11:53	08/16/16 17:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/13/16 11:53	08/16/16 17:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/13/16 11:53	08/16/16 17:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/13/16 11:53	08/16/16 17:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/13/16 11:53	08/16/16 17:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/13/16 11:53	08/16/16 17:50	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		08/13/16 11:53	08/16/16 17:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/13/16 11:53	08/16/16 17:50	5

Lab Sample ID: LCS 400-318480/2-A ^1
Matrix: Water
Analysis Batch: 318871

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318480

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Antimony	0.0500	0.0589		mg/L		118		80 - 120
Arsenic	0.0500	0.0563		mg/L		113		80 - 120
Barium	0.0500	0.0500		mg/L		100		80 - 120
Beryllium	0.0500	0.0502		mg/L		100		80 - 120
Boron	0.100	0.102		mg/L		102		80 - 120
Cadmium	0.0500	0.0532		mg/L		106		80 - 120
Calcium	5.00	4.81		mg/L		96		80 - 120
Chromium	0.0500	0.0521		mg/L		104		80 - 120
Cobalt	0.0500	0.0503		mg/L		101		80 - 120
Lead	0.0500	0.0489		mg/L		98		80 - 120
Lithium	0.0500	0.0481		mg/L		96		80 - 120
Molybdenum	0.0500	0.0524		mg/L		105		80 - 120
Selenium	0.0500	0.0516 ^		mg/L		103		80 - 120
Thallium	0.0100	0.0102		mg/L		102		80 - 120

Lab Sample ID: 400-125635-20 MS
Matrix: Water
Analysis Batch: 318871

Client Sample ID: FERB-1
Prep Type: Total Recoverable
Prep Batch: 318480

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Antimony	<0.0010	F1	0.0500	0.0577		mg/L		115		75 - 125
Arsenic	<0.00046		0.0500	0.0550		mg/L		110		75 - 125
Barium	<0.00049		0.0500	0.0483		mg/L		97		75 - 125
Beryllium	<0.00034		0.0500	0.0506		mg/L		101		75 - 125
Boron	<0.021		0.100	0.121		mg/L		121		75 - 125
Cadmium	<0.00034		0.0500	0.0505		mg/L		101		75 - 125
Calcium	<0.13		5.00	4.78		mg/L		96		75 - 125
Chromium	<0.0011		0.0500	0.0510		mg/L		102		75 - 125
Cobalt	<0.00040		0.0500	0.0503		mg/L		101		75 - 125
Lead	<0.00035		0.0500	0.0497		mg/L		99		75 - 125
Lithium	<0.0032		0.0500	0.0499		mg/L		100		75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: 400-125635-20 MS
Matrix: Water
Analysis Batch: 318871

Client Sample ID: FERB-1
Prep Type: Total Recoverable
Prep Batch: 318480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	<0.00085		0.0500	0.0517		mg/L		103	75 - 125
Selenium	0.00039	J ^	0.0500	0.0515	^	mg/L		102	75 - 125
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125

Lab Sample ID: 400-125635-20 MSD
Matrix: Water
Analysis Batch: 318871

Client Sample ID: FERB-1
Prep Type: Total Recoverable
Prep Batch: 318480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010	F1	0.0500	0.0635	F1	mg/L		127	75 - 125	10	20
Arsenic	<0.00046		0.0500	0.0600		mg/L		120	75 - 125	9	20
Barium	<0.00049		0.0500	0.0527		mg/L		105	75 - 125	9	20
Beryllium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125	2	20
Boron	<0.021		0.100	0.0991		mg/L		99	75 - 125	20	20
Cadmium	<0.00034		0.0500	0.0560		mg/L		112	75 - 125	10	20
Calcium	<0.13		5.00	5.15		mg/L		103	75 - 125	7	20
Chromium	<0.0011		0.0500	0.0575		mg/L		115	75 - 125	12	20
Cobalt	<0.00040		0.0500	0.0556		mg/L		111	75 - 125	10	20
Lead	<0.00035		0.0500	0.0478		mg/L		96	75 - 125	4	20
Lithium	<0.0032		0.0500	0.0490		mg/L		98	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0560		mg/L		112	75 - 125	8	20
Selenium	0.00039	J ^	0.0500	0.0505	^	mg/L		100	75 - 125	2	20
Thallium	<0.000085		0.0100	0.00993		mg/L		99	75 - 125	4	20

Lab Sample ID: MB 400-318505/1-A ^5
Matrix: Water
Analysis Batch: 318871

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318505

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/14/16 11:48	08/16/16 17:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/14/16 11:48	08/16/16 17:27	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/14/16 11:48	08/16/16 17:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/14/16 11:48	08/16/16 17:27	5
Boron	<0.021		0.050	0.021	mg/L		08/14/16 11:48	08/16/16 17:27	5
Calcium	<0.13		0.25	0.13	mg/L		08/14/16 11:48	08/16/16 17:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/14/16 11:48	08/16/16 17:27	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/14/16 11:48	08/16/16 17:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/14/16 11:48	08/16/16 17:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/14/16 11:48	08/16/16 17:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/14/16 11:48	08/16/16 17:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/14/16 11:48	08/16/16 17:27	5

Lab Sample ID: LCS 400-318505/2-A ^1
Matrix: Water
Analysis Batch: 318871

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0554		mg/L		111	80 - 120
Arsenic	0.0500	0.0538		mg/L		108	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: LCS 400-318505/2-A ^1
Matrix: Water
Analysis Batch: 318871

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0500	0.0469		mg/L		94	80 - 120
Beryllium	0.0500	0.0520		mg/L		104	80 - 120
Boron	0.100	0.105		mg/L		105	80 - 120
Cadmium	0.0500	0.0503		mg/L		101	80 - 120
Calcium	5.00	4.65		mg/L		93	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Cobalt	0.0500	0.0477		mg/L		95	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Lithium	0.0500	0.0504		mg/L		101	80 - 120
Molybdenum	0.0500	0.0500		mg/L		100	80 - 120
Selenium	0.0500	0.0513	^	mg/L		103	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-125635-21 MS
Matrix: Water
Analysis Batch: 318871

Client Sample ID: DUP-2
Prep Type: Total Recoverable
Prep Batch: 318505

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0561		mg/L		112	75 - 125
Arsenic	<0.00046		0.0500	0.0549		mg/L		110	75 - 125
Barium	0.025		0.0500	0.0701		mg/L		90	75 - 125
Beryllium	0.00035	J	0.0500	0.0495		mg/L		98	75 - 125
Boron	<0.021		0.100	0.123		mg/L		123	75 - 125
Cadmium	0.00035	J	0.0500	0.0512		mg/L		102	75 - 125
Calcium	1.5		5.00	6.23		mg/L		95	75 - 125
Chromium	<0.0011		0.0500	0.0507		mg/L		101	75 - 125
Cobalt	0.0026		0.0500	0.0519		mg/L		99	75 - 125
Lead	<0.00035		0.0500	0.0483		mg/L		97	75 - 125
Lithium	<0.0032		0.0500	0.0488		mg/L		98	75 - 125
Molybdenum	<0.00085		0.0500	0.0513		mg/L		103	75 - 125
Selenium	<0.00024	^	0.0500	0.0513	^	mg/L		103	75 - 125
Thallium	<0.00085		0.0100	0.0101		mg/L		101	75 - 125

Lab Sample ID: 400-125635-21 MSD
Matrix: Water
Analysis Batch: 318871

Client Sample ID: DUP-2
Prep Type: Total Recoverable
Prep Batch: 318505

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0542		mg/L		108	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0531		mg/L		106	75 - 125	3	20
Barium	0.025		0.0500	0.0701		mg/L		90	75 - 125	0	20
Beryllium	0.00035	J	0.0500	0.0498		mg/L		99	75 - 125	0	20
Boron	<0.021		0.100	0.116		mg/L		116	75 - 125	5	20
Cadmium	0.00035	J	0.0500	0.0516		mg/L		102	75 - 125	1	20
Calcium	1.5		5.00	6.03		mg/L		91	75 - 125	3	20
Chromium	<0.0011		0.0500	0.0491		mg/L		98	75 - 125	3	20
Cobalt	0.0026		0.0500	0.0494		mg/L		94	75 - 125	5	20
Lead	<0.00035		0.0500	0.0490		mg/L		98	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0488		mg/L		98	75 - 125	0	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: 400-125635-21 MSD
Matrix: Water
Analysis Batch: 318871

Client Sample ID: DUP-2
Prep Type: Total Recoverable
Prep Batch: 318505

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Molybdenum	<0.00085		0.0500	0.0497		mg/L		99	75 - 125	3	20
Selenium	<0.00024	^	0.0500	0.0505	^	mg/L		101	75 - 125	2	20
Thallium	<0.00085		0.0100	0.0101		mg/L		101	75 - 125	0	20

Lab Sample ID: MB 400-318615/1-A ^5
Matrix: Water
Analysis Batch: 319047

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		08/15/16 13:50	08/17/16 14:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/15/16 13:50	08/17/16 14:06	5
Barium	0.000615	J	0.0025	0.00049	mg/L		08/15/16 13:50	08/17/16 14:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/17/16 14:06	5
Calcium	<0.13		0.25	0.13	mg/L		08/15/16 13:50	08/17/16 14:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/15/16 13:50	08/17/16 14:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/15/16 13:50	08/17/16 14:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/15/16 13:50	08/17/16 14:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/15/16 13:50	08/17/16 14:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/15/16 13:50	08/17/16 14:06	5
Thallium	<0.00085		0.00050	0.000085	mg/L		08/15/16 13:50	08/17/16 14:06	5

Lab Sample ID: MB 400-318615/1-A ^5
Matrix: Water
Analysis Batch: 319499

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/15/16 13:50	08/19/16 12:47	5
Boron	<0.021		0.050	0.021	mg/L		08/15/16 13:50	08/19/16 12:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/15/16 13:50	08/19/16 12:47	5

Lab Sample ID: LCS 400-318615/2-A ^1
Matrix: Water
Analysis Batch: 319047

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Antimony	0.0500	0.0557		mg/L		111	80 - 120
Arsenic	0.0500	0.0552		mg/L		110	80 - 120
Barium	0.0500	0.0481		mg/L		96	80 - 120
Cadmium	0.0500	0.0498		mg/L		100	80 - 120
Calcium	5.00	4.79		mg/L		96	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Cobalt	0.0500	0.0471		mg/L		94	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Molybdenum	0.0500	0.0497		mg/L		99	80 - 120
Selenium	0.0500	0.0522		mg/L		104	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: LCS 400-318615/2-A ^1
Matrix: Water
Analysis Batch: 319499

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Beryllium	0.0500	0.0515		mg/L		103	80 - 120
Boron	0.100	0.101		mg/L		101	80 - 120
Lithium	0.0500	0.0482		mg/L		96	80 - 120

Lab Sample ID: 400-125806-B-1-C MS ^5
Matrix: Water
Analysis Batch: 319047

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0548		mg/L		110	75 - 125
Arsenic	<0.00046		0.0500	0.0566		mg/L		113	75 - 125
Barium	0.012	B	0.0500	0.0602		mg/L		97	75 - 125
Beryllium	<0.00034	^	0.0500	0.0434	^	mg/L		87	75 - 125
Boron	<0.021	^	0.100	0.100	^	mg/L		100	75 - 125
Cadmium	<0.00034		0.0500	0.0519		mg/L		104	75 - 125
Calcium	11		5.00	16.1		mg/L		94	75 - 125
Chromium	0.0097		0.0500	0.0595		mg/L		100	75 - 125
Cobalt	<0.00040		0.0500	0.0483		mg/L		97	75 - 125
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125
Lithium	<0.0032	^	0.0500	0.0402	^	mg/L		80	75 - 125
Molybdenum	<0.00085		0.0500	0.0522		mg/L		104	75 - 125
Selenium	0.00036	J	0.0500	0.0520		mg/L		103	75 - 125
Thallium	<0.00085		0.0100	0.0102		mg/L		102	75 - 125

Lab Sample ID: 400-125806-B-1-C MS ^5
Matrix: Water
Analysis Batch: 319499

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Beryllium	<0.00034		0.0500	0.0552		mg/L		110	75 - 125
Boron	<0.021		0.100	0.101		mg/L		101	75 - 125
Lithium	<0.0032		0.0500	0.0518		mg/L		104	75 - 125

Lab Sample ID: 400-125806-B-1-D MSD ^5
Matrix: Water
Analysis Batch: 319047

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0566		mg/L		113	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0564		mg/L		113	75 - 125	0	20
Barium	0.012	B	0.0500	0.0586		mg/L		94	75 - 125	3	20
Beryllium	<0.00034	^	0.0500	0.0442	^	mg/L		88	75 - 125	2	20
Boron	<0.021	^	0.100	0.0962	^	mg/L		96	75 - 125	4	20
Cadmium	<0.00034		0.0500	0.0535		mg/L		107	75 - 125	3	20
Calcium	11		5.00	15.8		mg/L		88	75 - 125	2	20
Chromium	0.0097		0.0500	0.0597		mg/L		100	75 - 125	0	20
Cobalt	<0.00040		0.0500	0.0482		mg/L		96	75 - 125	0	20
Lead	<0.00035		0.0500	0.0492		mg/L		98	75 - 125	0	20
Lithium	<0.0032	^	0.0500	0.0408	^	mg/L		82	75 - 125	2	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: 400-125806-B-1-D MSD ^5
Matrix: Water
Analysis Batch: 319047

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Molybdenum	<0.00085		0.0500	0.0511		mg/L		102	75 - 125	2	20
Selenium	0.00036	J	0.0500	0.0521		mg/L		104	75 - 125	0	20
Thallium	<0.00085		0.0100	0.0102		mg/L		102	75 - 125	0	20

Lab Sample ID: 400-125806-B-1-D MSD ^5
Matrix: Water
Analysis Batch: 319499

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 318615

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Beryllium	<0.00034		0.0500	0.0544		mg/L		109	75 - 125	1	20
Boron	<0.021		0.100	0.0959		mg/L		96	75 - 125	5	20
Lithium	<0.0032		0.0500	0.0499		mg/L		100	75 - 125	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-318218/14-A
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318218

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000108	J	0.00020	0.000070	mg/L		08/11/16 13:43	08/15/16 09:01	1

Lab Sample ID: LCS 400-318218/15-A
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318218

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Added	Result				Qualifier
Mercury	0.00101	0.00104		mg/L		103	80 - 120

Lab Sample ID: 400-125662-B-10-B MS
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 318218

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00192		mg/L		95	80 - 120

Lab Sample ID: 400-125662-B-10-C MSD
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 318218

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00195		mg/L		97	80 - 120	2	20

Lab Sample ID: MB 400-318491/14-A
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318491

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000114	J	0.00020	0.000070	mg/L		08/13/16 13:19	08/15/16 12:35	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 400-318491/15-A
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318491

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00105		mg/L		104	80 - 120

Lab Sample ID: 680-128593-D-2-B MS
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 318491

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F2 F1	0.00201	0.00184		mg/L		91	80 - 120

Lab Sample ID: 680-128593-D-2-C MSD
Matrix: Water
Analysis Batch: 318616

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 318491

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070	F2 F1	0.00201	0.00178		mg/L		88	80 - 120	3	20

Lab Sample ID: MB 400-318606/14-A
Matrix: Water
Analysis Batch: 318803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318606

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/15/16 12:12	08/16/16 13:10	1

Lab Sample ID: LCS 400-318606/15-A
Matrix: Water
Analysis Batch: 318803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318606

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000954		mg/L		95	80 - 120

Lab Sample ID: 400-125840-B-8-B MS
Matrix: Water
Analysis Batch: 318803

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 318606

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F1	0.00201	0.00158	F1	mg/L		78	80 - 120

Lab Sample ID: 400-125840-B-8-C MSD
Matrix: Water
Analysis Batch: 318803

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 318606

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070	F1	0.00201	0.00157	F1	mg/L		78	80 - 120	1	20

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
SDG: LF #4

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

Lab Sample ID: MB 400-318272/1
Matrix: Water
Analysis Batch: 318272

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			08/11/16 17:20	1

Lab Sample ID: LCS 400-318272/2
Matrix: Water
Analysis Batch: 318272

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: 400-125635-1 DU
Matrix: Water
Analysis Batch: 318272

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	18		18.0		mg/L		0	5

Lab Sample ID: MB 400-318486/1
Matrix: Water
Analysis Batch: 318486

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			08/13/16 15:18	1

Lab Sample ID: LCS 400-318486/2
Matrix: Water
Analysis Batch: 318486

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: 400-125635-10 DU
Matrix: Water
Analysis Batch: 318486

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	10		10.0		mg/L		0	5

Lab Sample ID: 400-125635-16 DU
Matrix: Water
Analysis Batch: 318486

Client Sample ID: GWC-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	6.0		6.00		mg/L		0	5

Lab Sample ID: MB 400-318488/1
Matrix: Water
Analysis Batch: 318488

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			08/13/16 16:16	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Lab Sample ID: LCS 400-318488/2
Matrix: Water
Analysis Batch: 318488

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	294		mg/L		100	78 - 122

Lab Sample ID: 400-125730-A-1 DU
Matrix: Water
Analysis Batch: 318488

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	340		336		mg/L		0	5

Lab Sample ID: MB 400-318950/1
Matrix: Water
Analysis Batch: 318950

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			08/17/16 16:42	1

Lab Sample ID: LCS 400-318950/2
Matrix: Water
Analysis Batch: 318950

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: 400-125635-24 DU
Matrix: Water
Analysis Batch: 318950

Client Sample ID: GWC-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	78		78.0		mg/L		0	5

TestAmerica Pensacola

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

Chain of Custody Record



Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10785 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: CF #4		Lab PM: Whitmire, Chyenenne R E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: 400-57303-24790.1 Page: 1 of 1 Job #:													
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOV#:		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 TDS - SM 2640C; Cl, F, SO4 - EPA 300 Radium 228 & 228 - SW-846 9316 & 9320															
Sample Identification Sample ID: GWA-3 GWA-14 GWA-5 GWA-16 GWA-2 GWA-15 DUP-1 GWA-13 GWC-17		Sample Date 8/9/2016 8/9/2016 8/9/2016 8/9/2016 8/9/2016 8/9/2016 8/9/2016 8/9/2016 8/9/2016		Sample Time 09:57 12:45 10:25 17:47 10:10 10:12 - 12:35 14:35		Sample Type (G=Grab) G G G G B G G G G G G G		Matrix (W=Water, S=Solid, O=Other) Water Water Water Water Water Water Water Water Water Water Water Water		Field Filtered (Yes/No) X X X X X X X X X X X X		Preservation Code G G G G B G G G G G G G		Total Number of Containers X X X X X X X X X X X X		Special Instructions/Note: 680-128493 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:											
Empty Kit Relinquished by:		Date:		Method of Shipment:													
Relinquished by: <i>Coyce Mungle</i>		Date/Time: 8/10/16 8:00		Received by: <i>V. Jackson</i>		Date/Time: 8/10/16 8:00											
Relinquished by:		Date/Time:		Received by:		Date/Time:											
Relinquished by:		Date/Time:		Received by:		Date/Time:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.91071.0/0.71071.0		680-128493											



Chain of Custody Record

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

Client Information Client Contact: Jolu Abraham Company: Southern Company Address: 2411 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: UF #4		Lab PI#: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com Carrier Tracking No(s): Lab #: Job #: Page: 1 of 2 COC No: 400-57303-24790.1	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9316 & 9320 TDS - SM 2640C: Cl, F, SO4 - EPA 300 TDS - SM 2640C: Cl, F, SO4 - EPA 300 Total Number of Containers:	
Sample Identification Sample ID Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=other, B=BT, H=Hazardous, J=Jug)		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 Dodecylsulfate U - Acetone V - MCAA W - ph 4-5 X - other (specify)	
Sample ID Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=other, B=BT, H=Hazardous, J=Jug)		Special Instructions/Note: Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Special Instructions/QC Requirements: Method of Shipment: Date/Time:	
Deliverable Requested: I, II, III, IV, Other (specify)		Received by: V. Jackson Date/Time: 8/11/16 8:05 Received by: Date/Time: Received by: Date/Time:	
Empty Kit Relinquished by: Relinquished by: [Signature] Date/Time: 8/11/16 08:05 Relinquished by: Date/Time: Relinquished by: Date/Time:		Company: EPA Company: EPA Company: EPA Cooler Temperature(s) °C and Other Remarks:	
Custody Seals Intact: A Yes Δ No		Custody Seal No.:	



Chain of Custody Record

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

Client Information

Client Contact:
Joju Abraham

Company:
Southern Company

Address:
241 Ralph McGill Blvd SE B10185

City:
Atlanta

State, Zip:
GA, 30308

Phone:
404-506-7239

Email:
JAbraham@southernco.com

Project Name:
CCR-Plant McIntosh

Site:
LF #4

Sampler:
ERM

Phone:

Lab PM:
Whitmore, Chyenne R

E-Mail:
chyenne.whitmore@testamericainc.com

COC No:
400-57303-24790.1

Page:
2 of 2

Job #:

Carrier Tracking No(s):

Analysis Requested

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

SSON#:

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2OAS
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2SO4
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Special Instructions/Note:

Sample Identification

DUP-2

Sample Date
8/10/2016

Sample Time
-

Sample Type
(C-comp, G-grab)
G

Matrix
(Water, Solid, Other)
Water

Water

Water

Water

Water

Water

Water

Water

Water

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Water

Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact: Yes No

Custody Seal No.:

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

Special Instructions/QC Requirements:

Method of Shipment:

Date:

Date/Time:

Date/Time:

Date/Time:

Received by: *ERM*

Date/Time: *8/10/16 10:05*

Received by:

Date/Time:

Received by: *ERM*

Date/Time: *8/10/16 8:05*

Received by:

Date/Time:

Cooler Temperature(s) °C and Other Remarks:

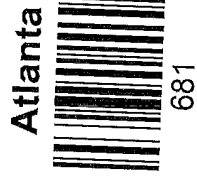


TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

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Client Information		Lab P/W: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Joju Abraham		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-57303-24790.1	
Company: Southern Company		Address: 241 Ralph McGill Blvd SE B10185		Page: 1 of 1	
City: Atlanta		State, Zip: GA, 30308		Job #:	
Phone: 404-506-7239		E-mail: JAbraham@southernco.com		Preservation Codes:	
Project Name: CCR - Plant McIntosh		Project #: LF #4		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 Y - EDA Z - other (specify)	
Site: LF #4		Due Date Requested:		Other:	
TAT Requested (days):		PO #:		Total Number of Containers	
WO #:		WFO #:		Special Instructions/Note:	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals Appendix III & IV - EPA 6020 & EPA 7470	
TDS - SM 2640C ; Cl,F,S04 - EPA 300		Metals Appendix III & IV - EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320	
Sample Identification		Sample Date		Sample Time	
Sample Type (C=Comp, G=grab)		Sample Matrix (W=water, S=soil, O=oil, B=BT-Tissue, A=Air)		Preservation Code	
GWA-4R	6	8/11/2016	09:20	Water	3
GW C-2A	6	8/11/2016	08:40	Water	3
GW C-18	6	8/11/2016	10:15	Water	3
FB-2	6	8/11/2016	07:45	Water	3
FERB-2	6	8/11/2016	10:30	Water	
				Water	
				Water	
				Water	
				Water	
				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					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
Relinquished by: [Signature]					
Relinquished by: [Signature]					
Relinquished by: [Signature]					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal No.:					



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-125635-1

SDG Number: LF #4

Login Number: 125635

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.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C IR-5; 3.7°C, 2.9°C IR-6; 1.1°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Certification Summary

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

TestAmerica Job ID: 400-125635-1
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16
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

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-125635-2

TestAmerica Sample Delivery Group: LF #4

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:

9/12/2016 11:37:53 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Job ID: 400-125635-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-125635-2

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-265344: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-3 (400-125635-1), GWA-14 (400-125635-2), GWA-5 (400-125635-3), GWA-16 (400-125635-4), GWA-2 (400-125635-5), GWA-15 (400-125635-6), DUP-1 (400-125635-7), GWA-13 (400-125635-8), GWC-17 (400-125635-9), GWC-1 (400-125635-10), GWC-12 (400-125635-11), GWC-11 (400-125635-12), GWC-10 (400-125635-13), GWC-9 (400-125635-14), GWC-21 (400-125635-15), GWC-20 (400-125635-16), GWC-19 (400-125635-17), GWC-23 (400-125635-18), FB-1 (400-125635-19) and FERB-1 (400-125635-20). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-265339: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-3 (400-125635-1), GWA-14 (400-125635-2), GWA-5 (400-125635-3), GWA-16 (400-125635-4), GWA-2 (400-125635-5), GWA-15 (400-125635-6), DUP-1 (400-125635-7), GWA-13 (400-125635-8), GWC-17 (400-125635-9), GWC-1 (400-125635-10), GWC-12 (400-125635-11), GWC-11 (400-125635-12), GWC-10 (400-125635-13), GWC-9 (400-125635-14), GWC-21 (400-125635-15), GWC-20 (400-125635-16), GWC-19 (400-125635-17), GWC-23 (400-125635-18), FB-1 (400-125635-19) and FERB-1 (400-125635-20). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-125635-1	GWA-3	Water	08/09/16 09:59	08/10/16 08:00
400-125635-2	GWA-14	Water	08/09/16 12:45	08/10/16 08:00
400-125635-3	GWA-5	Water	08/09/16 10:25	08/10/16 08:00
400-125635-4	GWA-16	Water	08/09/16 13:47	08/10/16 08:00
400-125635-5	GWA-2	Water	08/09/16 10:10	08/10/16 08:00
400-125635-6	GWA-15	Water	08/09/16 12:12	08/10/16 08:00
400-125635-7	DUP-1	Water	08/09/16 00:00	08/10/16 08:00
400-125635-8	GWA-13	Water	08/09/16 12:35	08/10/16 08:00
400-125635-9	GWC-17	Water	08/09/16 14:35	08/10/16 08:00
400-125635-10	GWC-1	Water	08/10/16 09:30	08/11/16 08:05
400-125635-11	GWC-12	Water	08/10/16 10:40	08/11/16 08:05
400-125635-12	GWC-11	Water	08/10/16 11:35	08/11/16 08:05
400-125635-13	GWC-10	Water	08/10/16 11:05	08/11/16 08:05
400-125635-14	GWC-9	Water	08/10/16 14:00	08/11/16 08:05
400-125635-15	GWC-21	Water	08/10/16 12:55	08/11/16 08:05
400-125635-16	GWC-20	Water	08/10/16 12:40	08/11/16 08:05
400-125635-17	GWC-19	Water	08/10/16 17:25	08/11/16 08:05
400-125635-18	GWC-23	Water	08/10/16 16:05	08/11/16 08:05
400-125635-19	FB-1	Water	08/10/16 16:00	08/11/16 08:05
400-125635-20	FERB-1	Water	08/10/16 16:15	08/11/16 08:05
400-125635-21	DUP-2	Water	08/10/16 00:00	08/11/16 08:05
400-125635-22	GWA-4R	Water	08/11/16 09:20	08/12/16 13:45
400-125635-23	GWC-22	Water	08/11/16 08:40	08/12/16 13:45
400-125635-24	GWC-18	Water	08/11/16 10:15	08/12/16 13:45
400-125635-25	FB-2	Water	08/11/16 07:45	08/12/16 13:45
400-125635-26	FERB-2	Water	08/11/16 10:30	08/12/16 13:45

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 08/09/16 09:59
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-1
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	0.573		0.0997	0.112	1.00	0.0694	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0886	U	0.231	0.231	1.00	0.430	pCi/L	08/17/16 14:28	08/26/16 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					08/17/16 14:28	08/26/16 17:03	1
Y Carrier	87.9		40 - 110					08/17/16 14:28	08/26/16 17:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.485		0.251	0.257	5.00	0.430	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWA-14

Date Collected: 08/09/16 12:45

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-2

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	0.143		0.0589	0.0603	1.00	0.0683	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.241	U	0.271	0.272	1.00	0.445	pCi/L	08/17/16 14:28	08/26/16 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					08/17/16 14:28	08/26/16 17:03	1
Y Carrier	86.4		40 - 110					08/17/16 14:28	08/26/16 17:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.385	U	0.277	0.278	5.00	0.445	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWA-5
Date Collected: 08/09/16 10:25
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-3
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	0.294		0.0791	0.0834	1.00	0.0692	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.512		0.290	0.294	1.00	0.432	pCi/L	08/17/16 14:28	08/26/16 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					08/17/16 14:28	08/26/16 17:03	1
Y Carrier	88.6		40 - 110					08/17/16 14:28	08/26/16 17:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.806		0.301	0.306	5.00	0.432	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWA-16

Date Collected: 08/09/16 13:47

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-4

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	0.381		0.0901	0.0964	1.00	0.0896	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.104	U	0.213	0.213	1.00	0.366	pCi/L	08/17/16 14:28	08/26/16 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/17/16 14:28	08/26/16 17:03	1
Y Carrier	84.5		40 - 110					08/17/16 14:28	08/26/16 17:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.485		0.231	0.234	5.00	0.366	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 08/09/16 10:10
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-5
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	0.524		0.0963	0.107	1.00	0.0663	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.459	U	0.301	0.304	1.00	0.465	pCi/L	08/17/16 14:28	08/26/16 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					08/17/16 14:28	08/26/16 17:03	1
Y Carrier	86.0		40 - 110					08/17/16 14:28	08/26/16 17:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.983		0.316	0.322	5.00	0.465	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWA-15

Date Collected: 08/09/16 12:12

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-6

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.234		0.0693	0.0724	1.00	0.0627	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0429	U	0.252	0.252	1.00	0.462	pCi/L	08/17/16 14:28	08/26/16 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					08/17/16 14:28	08/26/16 17:03	1
Y Carrier	83.0		40 - 110					08/17/16 14:28	08/26/16 17:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.191	U	0.261	0.262	5.00	0.462	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 08/09/16 00:00
Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-7
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	0.620		0.105	0.119	1.00	0.0682	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.207	U	0.246	0.246	1.00	0.406	pCi/L	08/17/16 14:28	08/26/16 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/17/16 14:28	08/26/16 17:04	1
Y Carrier	84.9		40 - 110					08/17/16 14:28	08/26/16 17:04	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	0.826		0.267	0.274	5.00	0.406	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWA-13

Lab Sample ID: 400-125635-8

Date Collected: 08/09/16 12:35

Matrix: Water

Date Received: 08/10/16 08:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.231		0.0691	0.0721	1.00	0.0655	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00904	U	0.204	0.204	1.00	0.372	pCi/L	08/17/16 14:28	08/26/16 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 14:28	08/26/16 17:04	1
Y Carrier	90.5		40 - 110					08/17/16 14:28	08/26/16 17:04	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	0.222	U	0.216	0.217	5.00	0.372	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-17

Lab Sample ID: 400-125635-9

Date Collected: 08/09/16 14:35

Matrix: Water

Date Received: 08/10/16 08:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.236		0.0699	0.0730	1.00	0.0665	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0365	U	0.243	0.243	1.00	0.432	pCi/L	08/17/16 14:28	08/26/16 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/17/16 14:28	08/26/16 17:04	1
Y Carrier	85.2		40 - 110					08/17/16 14:28	08/26/16 17:04	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	0.272	U	0.253	0.254	5.00	0.432	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-1
Date Collected: 08/10/16 09:30
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-10
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	0.563		0.0983	0.111	1.00	0.0640	pCi/L	08/17/16 13:53	09/08/16 04:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/17/16 13:53	09/08/16 04:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.434		0.246	0.249	1.00	0.367	pCi/L	08/17/16 14:28	08/26/16 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/17/16 14:28	08/26/16 17:04	1
Y Carrier	90.8		40 - 110					08/17/16 14:28	08/26/16 17:04	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	0.997		0.265	0.272	5.00	0.367	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-12
Date Collected: 08/10/16 10:40
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-11
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	0.130		0.0530	0.0543	1.00	0.0590	pCi/L	08/17/16 13:53	09/08/16 05:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 13:53	09/08/16 05:19	1

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	0.212	0.213	1.00	0.344	pCi/L	08/17/16 14:28	08/26/16 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 14:28	08/26/16 17:04	1
Y Carrier	90.1		40 - 110					08/17/16 14:28	08/26/16 17:04	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	0.340	U	0.219	0.220	5.00	0.344	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWC-11

Date Collected: 08/10/16 11:35

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-12

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	0.0418	U	0.0401	0.0402	1.00	0.0626	pCi/L	08/17/16 13:53	09/08/16 04:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 13:53	09/08/16 04:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.622		0.246	0.253	1.00	0.334	pCi/L	08/17/16 14:28	08/26/16 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 14:28	08/26/16 17:04	1
Y Carrier	95.3		40 - 110					08/17/16 14:28	08/26/16 17:04	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	0.664		0.249	0.256	5.00	0.334	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWC-10

Date Collected: 08/10/16 11:05

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-13

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	0.0468	U	0.0418	0.0420	1.00	0.0642	pCi/L	08/17/16 13:53	09/08/16 04:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					08/17/16 13:53	09/08/16 04:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.274	U	0.308	0.309	1.00	0.506	pCi/L	08/17/16 14:28	08/26/16 17:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					08/17/16 14:28	08/26/16 17:05	1
Y Carrier	73.3		40 - 110					08/17/16 14:28	08/26/16 17:05	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	0.321	U	0.311	0.312	5.00	0.506	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-9
Date Collected: 08/10/16 14:00
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-14
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	0.740		0.122	0.139	1.00	0.0766	pCi/L	08/17/16 13:53	09/08/16 04:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.1		40 - 110					08/17/16 13:53	09/08/16 04:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.441	U	0.295	0.298	1.00	0.455	pCi/L	08/17/16 14:28	08/26/16 17:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.1		40 - 110					08/17/16 14:28	08/26/16 17:05	1
Y Carrier	94.2		40 - 110					08/17/16 14:28	08/26/16 17:05	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	1.18		0.319	0.329	5.00	0.455	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWC-21

Date Collected: 08/10/16 12:55

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-15

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.164		0.0607	0.0625	1.00	0.0692	pCi/L	08/17/16 13:53	09/08/16 04:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/17/16 13:53	09/08/16 04:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.178	U	0.266	0.267	1.00	0.448	pCi/L	08/17/16 14:28	08/26/16 17:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/17/16 14:28	08/26/16 17:05	1
Y Carrier	77.0		40 - 110					08/17/16 14:28	08/26/16 17:05	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	0.342	U	0.273	0.274	5.00	0.448	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-20

Date Collected: 08/10/16 12:40

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-16

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	0.327		0.0802	0.0855	1.00	0.0660	pCi/L	08/17/16 13:53	09/08/16 04:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/17/16 13:53	09/08/16 04:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0673	U	0.335	0.335	1.00	0.582	pCi/L	08/17/16 14:28	08/26/16 17:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/17/16 14:28	08/26/16 17:05	1
Y Carrier	88.2		40 - 110					08/17/16 14:28	08/26/16 17:05	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	0.395	U	0.345	0.346	5.00	0.582	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-125635-17

Date Collected: 08/10/16 17:25

Matrix: Water

Date Received: 08/11/16 08:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.126		0.0610	0.0621	1.00	0.0786	pCi/L	08/17/16 13:53	09/08/16 04:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					08/17/16 13:53	09/08/16 04:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.146	U	0.309	0.309	1.00	0.567	pCi/L	08/17/16 14:28	08/26/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					08/17/16 14:28	08/26/16 16:59	1
Y Carrier	86.7		40 - 110					08/17/16 14:28	08/26/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0200	U	0.315	0.315	5.00	0.567	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-23

Date Collected: 08/10/16 16:05

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-18

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.225		0.0686	0.0716	1.00	0.0656	pCi/L	08/17/16 13:53	09/08/16 04:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					08/17/16 13:53	09/08/16 04:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.166	U	0.256	0.257	1.00	0.431	pCi/L	08/17/16 14:28	08/26/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					08/17/16 14:28	08/26/16 16:59	1
Y Carrier	89.7		40 - 110					08/17/16 14:28	08/26/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.392	U	0.265	0.266	5.00	0.431	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: FB-1
Date Collected: 08/10/16 16:00
Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-19
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	0.0104	U	0.0310	0.0311	1.00	0.0584	pCi/L	08/17/16 13:53	09/08/16 04:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/17/16 13:53	09/08/16 04:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.168	U	0.263	0.263	1.00	0.442	pCi/L	08/17/16 14:28	08/26/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/17/16 14:28	08/26/16 16:59	1
Y Carrier	89.0		40 - 110					08/17/16 14:28	08/26/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.179	U	0.265	0.265	5.00	0.442	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: FERB-1

Lab Sample ID: 400-125635-20

Date Collected: 08/10/16 16:15

Matrix: Water

Date Received: 08/11/16 08:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0149	U	0.0434	0.0434	1.00	0.0794	pCi/L	08/17/16 13:53	09/08/16 04:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					08/17/16 13:53	09/08/16 04:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0993	U	0.320	0.320	1.00	0.551	pCi/L	08/17/16 14:28	08/26/16 16:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					08/17/16 14:28	08/26/16 16:59	1
Y Carrier	90.8		40 - 110					08/17/16 14:28	08/26/16 16:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.114	U	0.323	0.323	5.00	0.551	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: DUP-2

Date Collected: 08/10/16 00:00

Date Received: 08/11/16 08:05

Lab Sample ID: 400-125635-21

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	0.312		0.0832	0.0878	1.00	0.0782	pCi/L	08/17/16 14:30	09/08/16 09:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					08/17/16 14:30	09/08/16 09:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0345	U	0.206	0.206	1.00	0.363	pCi/L	08/17/16 15:18	08/31/16 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					08/17/16 15:18	08/31/16 17:46	1
Y Carrier	87.5		40 - 110					08/17/16 15:18	08/31/16 17:46	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	0.347	U	0.222	0.224	5.00	0.363	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWA-4R

Lab Sample ID: 400-125635-22

Date Collected: 08/11/16 09:20

Matrix: Water

Date Received: 08/12/16 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	0.227		0.0726	0.0754	1.00	0.0704	pCi/L	08/17/16 14:30	09/08/16 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 14:30	09/08/16 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0760	U	0.217	0.218	1.00	0.378	pCi/L	08/17/16 15:18	08/31/16 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					08/17/16 15:18	08/31/16 17:46	1
Y Carrier	84.9		40 - 110					08/17/16 15:18	08/31/16 17:46	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	0.303	U	0.229	0.230	5.00	0.378	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-22

Date Collected: 08/11/16 08:40

Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-23

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		0.0961	0.101	1.00	0.105	pCi/L	08/17/16 14:30	09/08/16 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					08/17/16 14:30	09/08/16 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.297	U	0.211	0.213	1.00	0.327	pCi/L	08/17/16 15:18	08/31/16 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					08/17/16 15:18	08/31/16 17:46	1
Y Carrier	87.9		40 - 110					08/17/16 15:18	08/31/16 17:46	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	0.645		0.232	0.236	5.00	0.327	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 08/11/16 10:15

Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-24

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.171		0.0640	0.0658	1.00	0.0664	pCi/L	08/17/16 14:30	09/08/16 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					08/17/16 14:30	09/08/16 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.129	U	0.304	0.304	1.00	0.518	pCi/L	08/17/16 15:18	08/31/16 17:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					08/17/16 15:18	08/31/16 17:46	1
Y Carrier	85.2		40 - 110					08/17/16 15:18	08/31/16 17:46	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	0.300	U	0.311	0.311	5.00	0.518	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: FB-2
Date Collected: 08/11/16 07:45
Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-25
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0212	U	0.0453	0.0454	1.00	0.0936	pCi/L	08/17/16 14:30	09/08/16 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110					08/17/16 14:30	09/08/16 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0823	U	0.179	0.180	1.00	0.341	pCi/L	08/17/16 15:18	08/31/16 17:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.7		40 - 110					08/17/16 15:18	08/31/16 17:47	1
Y Carrier	87.5		40 - 110					08/17/16 15:18	08/31/16 17:47	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	-0.104	U	0.185	0.185	5.00	0.341	pCi/L		09/09/16 01:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: FERB-2
Date Collected: 08/11/16 10:30
Date Received: 08/12/16 13:45

Lab Sample ID: 400-125635-26
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	0.00714	U	0.0585	0.0585	1.00	0.108	pCi/L	08/17/16 14:50	09/08/16 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/17/16 14:50	09/08/16 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0286	U	0.247	0.247	1.00	0.443	pCi/L	08/17/16 15:18	08/31/16 17:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/17/16 15:18	08/31/16 17:47	1
Y Carrier	84.5		40 - 110					08/17/16 15:18	08/31/16 17:47	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	-0.0215	U	0.253	0.253	5.00	0.443	pCi/L		09/09/16 01:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Client Sample ID: GWA-3

Date Collected: 08/09/16 09:59

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:03	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWA-14

Date Collected: 08/09/16 12:45

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:03	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWA-5

Date Collected: 08/09/16 10:25

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:03	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWA-16

Date Collected: 08/09/16 13:47

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:03	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 08/09/16 10:10

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:03	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWA-15

Date Collected: 08/09/16 12:12

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:03	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: DUP-1

Date Collected: 08/09/16 00:00

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:04	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWA-13

Date Collected: 08/09/16 12:35

Date Received: 08/10/16 08:00

Lab Sample ID: 400-125635-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:04	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWC-17

Lab Sample ID: 400-125635-9

Date Collected: 08/09/16 14:35

Matrix: Water

Date Received: 08/10/16 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:04	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-125635-10

Date Collected: 08/10/16 09:30

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:53	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:04	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-12

Lab Sample ID: 400-125635-11

Date Collected: 08/10/16 10:40

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 05:19	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:04	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-11

Lab Sample ID: 400-125635-12

Date Collected: 08/10/16 11:35

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:52	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:04	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWC-10

Lab Sample ID: 400-125635-13

Date Collected: 08/10/16 11:05

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:54	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:05	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-9

Lab Sample ID: 400-125635-14

Date Collected: 08/10/16 14:00

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:54	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:05	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-21

Lab Sample ID: 400-125635-15

Date Collected: 08/10/16 12:55

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268450	09/08/16 04:54	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:05	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-20

Lab Sample ID: 400-125635-16

Date Collected: 08/10/16 12:40

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 04:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266782	08/26/16 17:05	CMA	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-125635-17

Date Collected: 08/10/16 17:25

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 04:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266771	08/26/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-23

Lab Sample ID: 400-125635-18

Date Collected: 08/10/16 16:05

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 04:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266771	08/26/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-125635-19

Date Collected: 08/10/16 16:00

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 04:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266771	08/26/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-125635-20

Date Collected: 08/10/16 16:15

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265339	08/17/16 13:53	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 04:55	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265344	08/17/16 14:28	TJT	TAL SL
Total/NA	Analysis	9320		1	266771	08/26/16 16:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: DUP-2

Lab Sample ID: 400-125635-21

Date Collected: 08/10/16 00:00

Matrix: Water

Date Received: 08/11/16 08:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265346	08/17/16 14:30	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 09:00	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265357	08/17/16 15:18	TJT	TAL SL
Total/NA	Analysis	9320		1	267477	08/31/16 17:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWA-4R

Lab Sample ID: 400-125635-22

Date Collected: 08/11/16 09:20

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265346	08/17/16 14:30	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 09:01	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265357	08/17/16 15:18	TJT	TAL SL
Total/NA	Analysis	9320		1	267477	08/31/16 17:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-22

Lab Sample ID: 400-125635-23

Date Collected: 08/11/16 08:40

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265346	08/17/16 14:30	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 09:01	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265357	08/17/16 15:18	TJT	TAL SL
Total/NA	Analysis	9320		1	267477	08/31/16 17:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: GWC-18

Lab Sample ID: 400-125635-24

Date Collected: 08/11/16 10:15

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265346	08/17/16 14:30	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 09:01	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265357	08/17/16 15:18	TJT	TAL SL
Total/NA	Analysis	9320		1	267477	08/31/16 17:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Client Sample ID: FB-2

Lab Sample ID: 400-125635-25

Date Collected: 08/11/16 07:45

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265346	08/17/16 14:30	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 09:01	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265357	08/17/16 15:18	TJT	TAL SL
Total/NA	Analysis	9320		1	267550	08/31/16 17:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Client Sample ID: FERB-2

Lab Sample ID: 400-125635-26

Date Collected: 08/11/16 10:30

Matrix: Water

Date Received: 08/12/16 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			265346	08/17/16 14:50	TJT	TAL SL
Total/NA	Analysis	9315		1	268452	09/08/16 09:01	ALS	TAL SL
Total/NA	Prep	PrecSep_0			265357	08/17/16 15:18	TJT	TAL SL
Total/NA	Analysis	9320		1	267550	08/31/16 17:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	268635	09/09/16 01:23	ALS	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Rad

Prep Batch: 265339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total/NA	Water	PrecSep-21	
400-125635-2	GWA-14	Total/NA	Water	PrecSep-21	
400-125635-3	GWA-5	Total/NA	Water	PrecSep-21	
400-125635-4	GWA-16	Total/NA	Water	PrecSep-21	
400-125635-5	GWA-2	Total/NA	Water	PrecSep-21	
400-125635-6	GWA-15	Total/NA	Water	PrecSep-21	
400-125635-7	DUP-1	Total/NA	Water	PrecSep-21	
400-125635-8	GWA-13	Total/NA	Water	PrecSep-21	
400-125635-9	GWC-17	Total/NA	Water	PrecSep-21	
400-125635-10	GWC-1	Total/NA	Water	PrecSep-21	
400-125635-11	GWC-12	Total/NA	Water	PrecSep-21	
400-125635-12	GWC-11	Total/NA	Water	PrecSep-21	
400-125635-13	GWC-10	Total/NA	Water	PrecSep-21	
400-125635-14	GWC-9	Total/NA	Water	PrecSep-21	
400-125635-15	GWC-21	Total/NA	Water	PrecSep-21	
400-125635-16	GWC-20	Total/NA	Water	PrecSep-21	
400-125635-17	GWC-19	Total/NA	Water	PrecSep-21	
400-125635-18	GWC-23	Total/NA	Water	PrecSep-21	
400-125635-19	FB-1	Total/NA	Water	PrecSep-21	
400-125635-20	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-265339/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-265339/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-265339/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 265344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-1	GWA-3	Total/NA	Water	PrecSep_0	
400-125635-2	GWA-14	Total/NA	Water	PrecSep_0	
400-125635-3	GWA-5	Total/NA	Water	PrecSep_0	
400-125635-4	GWA-16	Total/NA	Water	PrecSep_0	
400-125635-5	GWA-2	Total/NA	Water	PrecSep_0	
400-125635-6	GWA-15	Total/NA	Water	PrecSep_0	
400-125635-7	DUP-1	Total/NA	Water	PrecSep_0	
400-125635-8	GWA-13	Total/NA	Water	PrecSep_0	
400-125635-9	GWC-17	Total/NA	Water	PrecSep_0	
400-125635-10	GWC-1	Total/NA	Water	PrecSep_0	
400-125635-11	GWC-12	Total/NA	Water	PrecSep_0	
400-125635-12	GWC-11	Total/NA	Water	PrecSep_0	
400-125635-13	GWC-10	Total/NA	Water	PrecSep_0	
400-125635-14	GWC-9	Total/NA	Water	PrecSep_0	
400-125635-15	GWC-21	Total/NA	Water	PrecSep_0	
400-125635-16	GWC-20	Total/NA	Water	PrecSep_0	
400-125635-17	GWC-19	Total/NA	Water	PrecSep_0	
400-125635-18	GWC-23	Total/NA	Water	PrecSep_0	
400-125635-19	FB-1	Total/NA	Water	PrecSep_0	
400-125635-20	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-265344/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-265344/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-265344/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Association Summary

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

Rad (Continued)

Prep Batch: 265346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-21	DUP-2	Total/NA	Water	PrecSep-21	
400-125635-22	GWA-4R	Total/NA	Water	PrecSep-21	
400-125635-23	GWC-22	Total/NA	Water	PrecSep-21	
400-125635-24	GWC-18	Total/NA	Water	PrecSep-21	
400-125635-25	FB-2	Total/NA	Water	PrecSep-21	
400-125635-26	FERB-2	Total/NA	Water	PrecSep-21	
MB 160-265346/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-265346/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
600-135331-A-30-D MS	Matrix Spike	Total/NA	Water	PrecSep-21	
600-135331-A-30-E MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 265357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125635-21	DUP-2	Total/NA	Water	PrecSep_0	
400-125635-22	GWA-4R	Total/NA	Water	PrecSep_0	
400-125635-23	GWC-22	Total/NA	Water	PrecSep_0	
400-125635-24	GWC-18	Total/NA	Water	PrecSep_0	
400-125635-25	FB-2	Total/NA	Water	PrecSep_0	
400-125635-26	FERB-2	Total/NA	Water	PrecSep_0	
MB 160-265357/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-265357/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
600-135331-A-30-F MS	Matrix Spike	Total/NA	Water	PrecSep_0	
600-135331-A-30-G MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-265339/1-A
Matrix: Water
Analysis Batch: 268450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265339

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03082	U	0.0414	0.0415	1.00	0.0695	pCi/L	08/17/16 13:53	09/08/16 04:52	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					08/17/16 13:53	09/08/16 04:52	1

Lab Sample ID: LCS 160-265339/2-A
Matrix: Water
Analysis Batch: 268450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265339

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	12.77		1.23	1.00	0.0722	pCi/L	114	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	91.2		40 - 110						

Lab Sample ID: LCSD 160-265339/3-A
Matrix: Water
Analysis Batch: 268450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 265339

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	12.20		1.18	1.00	0.0686	pCi/L	109	68 - 137	0.24	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	88.9		40 - 110								

Lab Sample ID: MB 160-265346/1-A
Matrix: Water
Analysis Batch: 268554

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265346

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05025	U	0.0511	0.0513	1.00	0.0810	pCi/L	08/17/16 14:30	09/08/16 08:48	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					08/17/16 14:30	09/08/16 08:48	1

Lab Sample ID: LCS 160-265346/2-A
Matrix: Water
Analysis Batch: 268554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265346

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	15.24		1.47	1.00	0.0717	pCi/L	137	68 - 137

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

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

Lab Sample ID: LCS 160-265346/2-A
Matrix: Water
Analysis Batch: 268554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265346

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	90.6		40 - 110

Lab Sample ID: 600-135331-A-30-D MS
Matrix: Water
Analysis Batch: 268554

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265346

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.978		11.2	15.57		1.50	1.00	0.0951	pCi/L	131	75 - 138

	MS	MS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.3		40 - 110

Lab Sample ID: 600-135331-A-30-E MSD
Matrix: Water
Analysis Batch: 268452

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 265346

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.978		11.2	14.69		1.42	1.00	0.0941	pCi/L	123	75 - 138	0.30	1

	MSD	MSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.6		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-265344/1-A
Matrix: Water
Analysis Batch: 266782

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265344

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1051	U	0.263	0.263	1.00	0.452	pCi/L	08/17/16 14:28	08/26/16 17:03	1

	MB	MB	Limits	Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110	08/17/16 14:28	08/26/16 17:03	1
Y Carrier	93.1		40 - 110	08/17/16 14:28	08/26/16 17:03	1

Lab Sample ID: LCS 160-265344/2-A
Matrix: Water
Analysis Batch: 266782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265344

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.7	14.96		1.60	1.00	0.355	pCi/L	102	56 - 140

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

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

Lab Sample ID: LCS 160-265344/2-A
Matrix: Water
Analysis Batch: 266782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265344

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.2		40 - 110
Y Carrier	94.6		40 - 110

Lab Sample ID: LCSD 160-265344/3-A
Matrix: Water
Analysis Batch: 266782

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 265344

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.7	16.32		1.76	1.00	0.479	pCi/L	111	56 - 140	0.40	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	88.9		40 - 110
Y Carrier	85.6		40 - 110

Lab Sample ID: MB 160-265357/1-A
Matrix: Water
Analysis Batch: 267477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265357

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.3000	U	0.265	0.267	1.00	0.523	pCi/L	08/17/16 15:18	08/31/16 17:43	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110	08/17/16 15:18	08/31/16 17:43	1
Y Carrier	79.6		40 - 110	08/17/16 15:18	08/31/16 17:43	1

Lab Sample ID: LCS 160-265357/2-A
Matrix: Water
Analysis Batch: 267477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265357

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.6	15.33		1.64	1.00	0.414	pCi/L	105	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.6		40 - 110
Y Carrier	88.2		40 - 110

Lab Sample ID: 600-135331-A-30-F MS
Matrix: Water
Analysis Batch: 267477

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265357

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.914		14.6	17.46		1.85	1.00	0.383	pCi/L	113	45 - 150

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125635-2
 SDG: LF #4

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

Lab Sample ID: 600-135331-A-30-F MS
Matrix: Water
Analysis Batch: 267477

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265357

	<i>MS</i>	<i>MS</i>	
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	92.3		40 - 110
<i>Y Carrier</i>	78.5		40 - 110

Lab Sample ID: 600-135331-A-30-G MSD
Matrix: Water
Analysis Batch: 267477

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 265357

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qual</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qual</i>	<i>Total Uncert. (2σ+/-)</i>	<i>RL</i>	<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec. Limits</i>		<i>RER</i>	<i>RER Limit</i>
Radium-228	0.914		14.6	15.79		1.68	1.00	0.355	pCi/L	102	45 - 150	0.47	1	

	<i>MSD</i>	<i>MSD</i>	
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	92.6		40 - 110
<i>Y Carrier</i>	84.5		40 - 110


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1257635
TestAmerica
 1257635

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

Chain of Custody Record

Client Information		Lab PM		Carrier Tracking No(s)		COC No	
Company: Southern Company		Whitmore, Cheryne R				400-57303-24790.1	
Address: 241 Ralph McGill Blvd SE B10185		E-Mail: cheryne.whitmore@testamerica.com				Page: 1 of 1	
City: Atlanta		Phone:				Job #:	
State, Zip: GA, 30308		Due Date Requested:				Preservation Codes:	
Phone: 404-506-7239		IAT Requested (days):				M - Hexane N - None O - AsNAO2 P - Na2O4S Q - Na2SO8 R - Na2S2O8 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ics J - DI Water K - EDTA L - EDA U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Email: J.Abraham@southernco.com		PO #:				Other:	
Project Name: OCR - Plant Mchctosh		WO #:				Special Instructions/Note:	
Site: CF #4		Project #:					
		SSOV#:					
Sample Identification	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (Water, Soil, Dioxin, etc)	Field Filtered (Yes/No)	Analysis Requested	Special Instructions/Note
GWA-3	8/9/2016	09:57	G	Water	X	TDS - SM 2840C; Cl, F, SO4 - EPA 308	
GWA-14	8/9/2016	12:45	G	Water	X	Metal Appendix III & IV - EPA 6020 & EPA 7470	
GWA-5	8/9/2016	10:25	G	Water	X	Radium 228 & 226 - SM-849 9316 & 9328	
GWA-10	8/9/2016	17:47	G	Water	X		
GWA-2	8/9/2016	10:10	B	Water	X		
GWA-15	8/9/2016	10:10	G	Water	X		
DUP-1	8/9/2016	-	B	Water	X		
GWA-13	8/9/2016	12:35	G	Water	X		
GWC-17	8/9/2016	14:35	G	Water	X		
	8/9/2016			Water	X		
	8/9/2016			Water	X		



680-128493 Chain of Custody

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:	Date:	Method of Shipment:	
Relinquished by: <i>Cape Verde</i>	Date/Time: 8/10/16 8:00	Received by: <i>V. Jackson</i>	Company: TA
Relinquished by:	Date/Time:	Received by: <i>Paula E. Allen</i>	Company: TA Pen
Relinquished by:	Date/Time:	Received by:	Company:
Custody Seals Intact	Custody Seal No.:	Cooler Temperature(s) To and Other Remarks:	
<input type="checkbox"/> Yes <input type="checkbox"/> No		0.910/0.710/0.8/0.9/0.1.0 680-128493	



Chain of Custody Record

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

COC No: 400-57303-24790.1
Page: 1 of 2
JOB #: 400-125635

Carrier Tracking No(s):

Lead Pkt: Whitney, Cheyenne R
E-Mail: cheyenne.whitney@testamericainc.com

Sampler: ERM
Phone:

Client Information
Client Contact: Joju Abraham
Company: Southern Company
Address: 241 Ralph McGill Blvd SE B10185
City: Atlanta
State, Zip: GA, 30308
Phone: 404-506-7239
Email: JAbraham@southemco.com
Project Name: COC - Plant McIntosh
Site: LE #4

Analysis Requested

Due Date Requested:	Analysis Requested
TAT Requested (days):	
FO #:	
WO #:	
Project #:	
SSON#:	

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Matrix (Water, Seawater, Other)	Method	Special Instructions/Notes
GWC-1	8/10/2016	09:30	G	Water	1	
GWC-1a	8/10/2016	10:40	G	Water	1	
GWC-11	8/10/2016	11:55	G	Water	1	
GWC-10	8/10/2016	11:05	G	Water	1	
GWC-9	8/10/2016	14:00	G	Water	1	
GWC-21	8/10/2016	12:55	G	Water	1	
GWC-20	8/10/2016	12:40	G	Water	1	
GWC-19	8/10/2016	17:25	G	Water	1	
GWC-23	8/10/2016	16:05	G	Water	1	
FB-1	8/10/2016	16:00	G	Water	1	
FERB-1	8/10/2016	16:15	G	Water	1	

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:

Received by:	Date/Time:	Company:
W. Jackson	8/11/16 8:05	ERM Company
W. Miller	8/12/2016 9:28	ERM Company
		ERM Company

Cooler Temperature(s) °C and Other Parameters:





Chain of Custody Record

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

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: J.Abraham@southernco.com Project Name: CCR - Plant McIntosh State: CF #4		Lab Pmt: Whitfire, Cheyenne R. E-Mail: cheyenne.whitfire@testamericainc.com	
Sampler: ERM Phone:	Carrier Tracking No(s): COC No: 400-57303-24790.1 Pages: 2 of 2 Job #: 400-125635		
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSON#:	Analysis Requested TDS - SM 2540C; Cl, F, SO4 - EPA 800 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9316 & 9320		
Preservation Codes: M - Hexane N - None O - AsNaO2 P - Zn Acetate Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - NCA4 W - pH 4.5 X - EDTA L - EDA Other:	Special Instructions/Note:		
Sample Identification DUP-2 Sample Date: 8/10/2016 Sample Time: - Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=Soil, O=Other, A=Air): Water Water Water Water Water Water Water Water Water Water	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Dispose By Lab <input type="checkbox"/> Archive For _____ Months		
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)			
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]	Received by: V. Scalet Received by: [Signature] Received by: [Signature]		
Date/Time: 8/10/2016 10:03 Date/Time: 8/10/2016 9:28 Date/Time:	Date/Time: 8/10/2016 8:07 Date/Time: 8/10/2016 9:28 Date/Time:		
Company: ERM Company: ERM Company:	Company: TA Company: APen Company:		
Cooler Temperature(s) °C and Other Remarks:			



Chain of Custody Record

Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: LF #4		Sampler: ERM Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-57303-24790.1 Page: 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 TDS - SM 2640C : Cl, F, SO4 - EPA 300 Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No) 400-125635 COC 	
Sample Identification Sample ID: GWA-4R GWC-2A GWC-18 FB-2 FERB-2		Matrix (Water, Seawater, Other): Water Sample Type (C=Comp, G=grab): G Sample Time: 09:20, 08:40, 10:15, 07:45, 10:30 Sample Date: 8/11/2016	
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		Special Instructions/Note: Atlanta  681	
Deliverable Requested: I, II, III, IV, Other (specify) Empty Kit Relinquished by:		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:	
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Received by: [Signature] Received by: [Signature] Received by: [Signature]	
Date/Time: 8/12/16 1600 Date/Time: 8/12/16 1345 Date/Time: 07/13/16 0901		Date/Time: 8/12/16 1345 Date/Time: 07/13/16 0901 Date/Time: 7/10/16 185	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-125635-2

SDG Number: LF #4

Login Number: 125635

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.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C IR-5; 3.7°C, 2.9°C IR-6; 1.1°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



Certification Summary

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16 *
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	T104704286-15-9	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	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.

TestAmerica Pensacola

Certification Summary

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

TestAmerica Job ID: 400-125635-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-127746-1

TestAmerica Sample Delivery Group: LF #4

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 4:44:20 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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Detection Summary

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

TestAmerica Job ID: 400-127746-1
 SDG: LF #4

Client Sample ID: GWA-2

Lab Sample ID: 400-127746-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.1		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.48		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		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: 400-127746-1
SDG: LF #4

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: 400-127746-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127746-1	GWA-2	Water	09/26/16 17:05	09/27/16 07:55

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

Client Sample Results

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 09/26/16 17:05
Date Received: 09/27/16 07:55

Lab Sample ID: 400-127746-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.0	0.89	mg/L			10/08/16 18:41	1
Fluoride	<0.082		0.20	0.082	mg/L			10/08/16 18:41	1
Sulfate	<0.70		1.0	0.70	mg/L			10/08/16 18:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/03/16 14:01	10/04/16 20:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/03/16 14:01	10/04/16 20:34	5
Barium	0.031		0.0025	0.00049	mg/L		10/03/16 14:01	10/04/16 20:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/03/16 14:01	10/04/16 20:34	5
Calcium	0.48		0.25	0.13	mg/L		10/03/16 14:01	10/04/16 20:34	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		10/03/16 14:01	10/04/16 20:34	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		10/03/16 14:01	10/04/16 20:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/03/16 14:01	10/04/16 20:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/03/16 14:01	10/04/16 20:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/03/16 14:01	10/04/16 20:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/03/16 14:01	10/04/16 20:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/03/16 14:01	10/04/16 20:34	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/03/16 14:01	10/05/16 16:16	5
Boron	<0.021		0.050	0.021	mg/L		10/03/16 14:01	10/05/16 16:16	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/04/16 09:03	10/07/16 08:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			09/29/16 18:17	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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: 400-127746-1
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 09/26/16 17:05

Date Received: 09/27/16 07:55

Lab Sample ID: 400-127746-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326101	10/08/16 18:41	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324868	10/03/16 14:01	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 20:34	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324868	10/03/16 14:01	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 16:16	AJR	TAL PEN
Total/NA	Prep	7470A			325215	10/04/16 09:03	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325819	10/07/16 08:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324695	09/29/16 18:17	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: 400-127746-1
SDG: LF #4

HPLC/IC

Analysis Batch: 326101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total/NA	Water	300.0	
MB 400-326101/4	Method Blank	Total/NA	Water	300.0	
LCS 400-326101/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-326101/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127231-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-127914-B-2 MS	Matrix Spike	Total/NA	Water	300.0	

Metals

Prep Batch: 324868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1 - RA	GWA-2	Total Recoverable	Water	3005A	
400-127746-1	GWA-2	Total Recoverable	Water	3005A	
MB 400-324868/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
MB 400-324868/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
LCS 400-324868/2-A ^1 - RA	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-324868/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-127374-B-1-B MS ^5 - R	Matrix Spike	Total Recoverable	Water	3005A	
400-127374-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-127374-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-127374-B-1-C MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 325215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total/NA	Water	7470A	
MB 400-325215/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-325215/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-127746-1 MS	GWA-2	Total/NA	Water	7470A	
400-127746-1 MSD	GWA-2	Total/NA	Water	7470A	

Analysis Batch: 325417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total Recoverable	Water	6020	324868
MB 400-324868/1-A ^5	Method Blank	Total Recoverable	Water	6020	324868
LCS 400-324868/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	324868
400-127374-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	324868
400-127374-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	324868

Analysis Batch: 325605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1 - RA	GWA-2	Total Recoverable	Water	6020	324868
MB 400-324868/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	324868
LCS 400-324868/2-A ^1 - RA	Lab Control Sample	Total Recoverable	Water	6020	324868
400-127374-B-1-B MS ^5 - R	Matrix Spike	Total Recoverable	Water	6020	324868
400-127374-B-1-C MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	6020	324868

Analysis Batch: 325819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total/NA	Water	7470A	325215
MB 400-325215/14-A	Method Blank	Total/NA	Water	7470A	325215

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

Metals (Continued)

Analysis Batch: 325819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-325215/15-A	Lab Control Sample	Total/NA	Water	7470A	325215
400-127746-1 MS	GWA-2	Total/NA	Water	7470A	325215
400-127746-1 MSD	GWA-2	Total/NA	Water	7470A	325215

General Chemistry

Analysis Batch: 324695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total/NA	Water	SM 2540C	
MB 400-324695/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-324695/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127767-A-4 DU	Duplicate	Total/NA	Water	SM 2540C	



QC Sample Results

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-326101/4
Matrix: Water
Analysis Batch: 326101

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/08/16 16:24	1
Fluoride	<0.082		0.20	0.082	mg/L			10/08/16 16:24	1
Sulfate	<0.70		1.0	0.70	mg/L			10/08/16 16:24	1

Lab Sample ID: LCS 400-326101/5
Matrix: Water
Analysis Batch: 326101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.80		mg/L		98	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 400-326101/6
Matrix: Water
Analysis Batch: 326101

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.94		mg/L		99	90 - 110	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	2	15

Lab Sample ID: 400-127231-A-4 MSD
Matrix: Water
Analysis Batch: 326101

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	260		200	453		mg/L		95	80 - 120	0	20
Fluoride	<1.6		200	211		mg/L		106	80 - 120	0	20
Sulfate	500		200	694		mg/L		99	80 - 120	1	20

Lab Sample ID: 400-127914-B-2 MS
Matrix: Water
Analysis Batch: 326101

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	6.9		10.0	16.9		mg/L		100	80 - 120
Fluoride	0.11	J	10.0	10.8		mg/L		106	80 - 120
Sulfate	2.5		10.0	13.0		mg/L		105	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-324868/1-A ^5
Matrix: Water
Analysis Batch: 325417

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/03/16 14:01	10/04/16 19:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/03/16 14:01	10/04/16 19:06	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

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

Lab Sample ID: MB 400-324868/1-A ^5
Matrix: Water
Analysis Batch: 325417

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.00049		0.0025	0.00049	mg/L		10/03/16 14:01	10/04/16 19:06	5
Boron	<0.021		0.050	0.021	mg/L		10/03/16 14:01	10/04/16 19:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/03/16 14:01	10/04/16 19:06	5
Calcium	<0.13		0.25	0.13	mg/L		10/03/16 14:01	10/04/16 19:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/03/16 14:01	10/04/16 19:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/03/16 14:01	10/04/16 19:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/03/16 14:01	10/04/16 19:06	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/03/16 14:01	10/04/16 19:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/03/16 14:01	10/04/16 19:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/03/16 14:01	10/04/16 19:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/03/16 14:01	10/04/16 19:06	5

Lab Sample ID: LCS 400-324868/2-A ^1
Matrix: Water
Analysis Batch: 325417

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0517		mg/L		103	80 - 120
Barium	0.0500	0.0450		mg/L		90	80 - 120
Boron	0.100	0.0903		mg/L		90	80 - 120
Cadmium	0.0500	0.0487		mg/L		97	80 - 120
Calcium	5.00	4.99		mg/L		100	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	0.0481		mg/L		96	80 - 120
Lithium	0.0500	0.0503		mg/L		101	80 - 120
Molybdenum	0.0500	0.0499		mg/L		100	80 - 120
Selenium	0.0500	0.0499		mg/L		100	80 - 120
Thallium	0.0100	0.00981		mg/L		98	80 - 120

Lab Sample ID: 400-127374-B-1-B MS ^5
Matrix: Water
Analysis Batch: 325417

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	Sample	Sample	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0517		mg/L		103	75 - 125
Arsenic	<0.00046		0.0500	0.0528		mg/L		106	75 - 125
Barium	0.017		0.0500	0.0633		mg/L		92	75 - 125
Cadmium	<0.00034		0.0500	0.0496		mg/L		99	75 - 125
Calcium	3.6		5.00	9.05		mg/L		108	75 - 125
Chromium	0.0019	J	0.0500	0.0545		mg/L		105	75 - 125
Cobalt	0.0011	J	0.0500	0.0526		mg/L		103	75 - 125
Lead	<0.00035		0.0500	0.0476		mg/L		95	75 - 125
Lithium	<0.0032		0.0500	0.0528		mg/L		106	75 - 125
Molybdenum	<0.00085		0.0500	0.0502		mg/L		100	75 - 125
Selenium	<0.00024		0.0500	0.0518		mg/L		104	75 - 125
Thallium	<0.000085		0.0100	0.0100		mg/L		100	75 - 125

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QC Sample Results

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

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

Lab Sample ID: 400-127374-B-1-C MSD ^5

Matrix: Water
Analysis Batch: 325417

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
	Result			Result					Limits		
Antimony	<0.0010		0.0500	0.0520		mg/L		104	75 - 125	1	20
Arsenic	<0.00046		0.0500	0.0527		mg/L		105	75 - 125	0	20
Barium	0.017		0.0500	0.0653		mg/L		96	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0503		mg/L		101	75 - 125	1	20
Calcium	3.6		5.00	8.87		mg/L		104	75 - 125	2	20
Chromium	0.0019	J	0.0500	0.0544		mg/L		105	75 - 125	0	20
Cobalt	0.0011	J	0.0500	0.0523		mg/L		103	75 - 125	1	20
Lead	<0.00035		0.0500	0.0471		mg/L		94	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0544		mg/L		109	75 - 125	3	20
Molybdenum	<0.00085		0.0500	0.0506		mg/L		101	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0522		mg/L		104	75 - 125	1	20
Thallium	<0.000085		0.0100	0.00999		mg/L		100	75 - 125	0	20

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

Lab Sample ID: MB 400-324868/1-A ^5

Matrix: Water
Analysis Batch: 325605

Client Sample ID: Method Blank

Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	MB	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result								
Beryllium - RA	<0.00034		0.0025	0.00034	mg/L		10/03/16 14:01	10/05/16 15:09	5
Boron - RA	<0.021		0.050	0.021	mg/L		10/03/16 14:01	10/05/16 15:09	5

Lab Sample ID: LCS 400-324868/2-A ^1

Matrix: Water
Analysis Batch: 325605

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	Spike Added	LCS	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
		Result					Limits	
Beryllium - RA	0.0500	0.0460		mg/L		92	80 - 120	
Boron - RA	0.100	0.0939		mg/L		94	80 - 120	

Lab Sample ID: 400-127374-B-1-B MS ^5

Matrix: Water
Analysis Batch: 325605

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS Qualifier	Unit	D	%Rec	%Rec.	Limits
	Result			Result					Limits	
Beryllium - RA	<0.00034		0.0500	0.0461		mg/L		92	75 - 125	
Boron - RA	<0.021		0.100	0.0975		mg/L		97	75 - 125	

Lab Sample ID: 400-127374-B-1-C MSD ^5

Matrix: Water
Analysis Batch: 325605

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable
Prep Batch: 324868

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
	Result			Result					Limits		
Beryllium - RA	<0.00034		0.0500	0.0457		mg/L		91	75 - 125	1	20
Boron - RA	<0.021		0.100	0.0940		mg/L		94	75 - 125	4	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127746-1
SDG: LF #4

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-325215/14-A
Matrix: Water
Analysis Batch: 325819

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 325215

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/04/16 08:55	10/07/16 08:44	1

Lab Sample ID: LCS 400-325215/15-A
Matrix: Water
Analysis Batch: 325819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 325215

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000912		mg/L		91	80 - 120

Lab Sample ID: 400-127746-1 MS
Matrix: Water
Analysis Batch: 325819

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 325215

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00176		mg/L		87	80 - 120

Lab Sample ID: 400-127746-1 MSD
Matrix: Water
Analysis Batch: 325819

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 325215

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00178		mg/L		89	80 - 120	1	20

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

Lab Sample ID: MB 400-324695/1
Matrix: Water
Analysis Batch: 324695

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/29/16 18:17	1

Lab Sample ID: LCS 400-324695/2
Matrix: Water
Analysis Batch: 324695

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	274		mg/L		94	78 - 122

Lab Sample ID: 400-127767-A-4 DU
Matrix: Water
Analysis Batch: 324695

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	510		506		mg/L		2	5

Chain of Custody Record

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2571

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: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: LFL4		Lab POC: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Carrier Tracking No(s): Page: 1 of 1 Job #: 400-127746	
Analysis Requested TDS - 8M 26400 : Cl, F, SO4 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - 5M-646 9316 & 9320		Preservation Codes: M - Hexane N - None O - As NaO2 P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify) Other:	
Sample Information Sampler: ERM - T. Payne, M. Rogers, T. Wardell Phone: 878-486-2700 Due Date/Requested: T. Payne, M. Rogers, T. Wardell TAT Requested (days): PO #: WO #: Project #: SSOW#:		Total Number of Containers: 3 Special Instructions/Note:	
Sample Identification GWA-2 Sample Date: 9/26/16 Sample Time: 1705 Sample Type: G Matrix: W Matrix (W=water, S=solid, O=organic, I=inorganic, A=air)		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)	
Relinquished by: Will V. Sig Relinquished by: [Signature] Relinquished by: [Signature]		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: Will V. Sig Relinquished by: [Signature]		Method of Shipment: Date/Time: 9/27/16 7:55 Received by: V. Jackson Date/Time: 9/28/16 9:32 Received by: [Signature]	
Custody Seal No.: Δ Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Cooler Temperature(s) °C and Other Remarks: 0.4/0.8	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127746-1

SDG Number: LF #4

Login Number: 127746

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.30°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.	N/A	
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: 400-127746-1
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

* Certification renewal pending - certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-127746-2

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

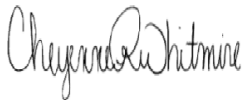
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/26/2016 4:44:46 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Case Narrative

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

TestAmerica Job ID: 400-127746-2
SDG: LF #4

Job ID: 400-127746-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127746-2

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-272603: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-2 (400-127746-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-272598: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-2 (400-127746-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

- 1
- 2
- 3
- 4
- 5
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- 7
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- 10
- 11
- 12
- 13

Method Summary

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

TestAmerica Job ID: 400-127746-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-127746-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127746-1	GWA-2	Water	09/26/16 17:05	09/27/16 07:55

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

Client Sample Results

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

TestAmerica Job ID: 400-127746-2
 SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 09/26/16 17:05
Date Received: 09/27/16 07:55

Lab Sample ID: 400-127746-1
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	0.686		0.140	0.153	1.00	0.123	pCi/L	09/30/16 17:27	10/24/16 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					09/30/16 17:27	10/24/16 14:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.342	U	0.264	0.265	1.00	0.416	pCi/L	09/30/16 18:17	10/20/16 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					09/30/16 18:17	10/20/16 14:36	1
Y Carrier	81.5		40 - 110					09/30/16 18:17	10/20/16 14:36	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.03		0.298	0.306	5.00	0.416	pCi/L		10/26/16 09:01	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127746-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-127746-2
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 09/26/16 17:05

Date Received: 09/27/16 07:55

Lab Sample ID: 400-127746-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272598	09/30/16 17:27	TJT	TAL SL
Total/NA	Analysis	9315		1	275778	10/24/16 14:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272603	09/30/16 18:17	TJT	TAL SL
Total/NA	Analysis	9320		1	275247	10/20/16 14:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	276028	10/26/16 09:01	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: 400-127746-2
SDG: LF #4

Rad

Prep Batch: 272598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total/NA	Water	PrecSep-21	
MB 160-272598/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-272598/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-272598/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 272603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127746-1	GWA-2	Total/NA	Water	PrecSep_0	
MB 160-272603/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-272603/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-272603/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-127746-2
SDG: LF #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-272598/1-A
Matrix: Water
Analysis Batch: 275778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272598

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.02771	U	0.0695	0.0696	1.00	0.140	pCi/L	09/30/16 17:27	10/24/16 14:32	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	86.9		40 - 110	09/30/16 17:27	10/24/16 14:32	1				

Lab Sample ID: LCS 160-272598/2-A
Matrix: Water
Analysis Batch: 275778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272598

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.1	14.65		1.44	1.00	0.0883	pCi/L	132	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed				
Ba Carrier	90.3		40 - 110	09/30/16 17:27	10/24/16 14:32	1			

Lab Sample ID: LCSD 160-272598/3-A
Matrix: Water
Analysis Batch: 275778

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272598

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.1	14.85		1.46	1.00	0.129	pCi/L	134	68 - 137	0.07	1
Carrier	LCSD LCSD		Limits			Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed						
Ba Carrier	90.0		40 - 110	09/30/16 17:27	10/24/16 14:32	1					

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-272603/1-A
Matrix: Water
Analysis Batch: 275247

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272603

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.05317	U	0.239	0.239	1.00	0.439	pCi/L	09/30/16 18:17	10/20/16 14:35	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	86.9		40 - 110	09/30/16 18:17	10/20/16 14:35	1				
Y Carrier	%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac		
Y Carrier	81.1		40 - 110	09/30/16 18:17	10/20/16 14:35	1				

QC Sample Results

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

TestAmerica Job ID: 400-127746-2
 SDG: LF #4

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

Lab Sample ID: LCS 160-272603/2-A
Matrix: Water
Analysis Batch: 275247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272603

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.4	18.01		1.89	1.00	0.380	pCi/L	125	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.3		40 - 110
Y Carrier	86.7		40 - 110

Lab Sample ID: LCSD 160-272603/3-A
Matrix: Water
Analysis Batch: 275247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272603

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.4	18.04		1.90	1.00	0.486	pCi/L	125	56 - 140	0.01	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	90.0		40 - 110
Y Carrier	88.2		40 - 110

Chain of Custody Record

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2571

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: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: LFL4		Lab POC: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Carrier Tracking No(s): Page: 1 of 1 Job #: 400-127746	
Sampler: ERM - T. Payne, M. Rogers, T. Wardell Phone: 878-486-2700 Due Date/Requested: T. Payne, M. Rogers, T. Wardell		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9316 & 9320 TDS - SM 26400 - C.F.F.S04 - EPA 300	
TAT Requested (days): PO #: WO #: Project #: SSOW#:	Sample Date: 9/26/16 Sample Time: 1705 Sample Type (C=Comp, G=grab): G Matrix (Water, Sediment, Overhaul, Stormwater, AWP)	Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDA Other:	Special Instructions/Note: Total Number of Containers: 3
Sample Identification GWA-2 Date/Time: 9/27/16 7:55 Received by: V. Jackson Date/Time: 9/28/16 9:32 Received by: [Signature] Date/Time: [Blank]			
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: Will V. [Signature] Date/Time: 9/27/16 0730 Company: ERA		Method of Shipment:	
Relinquished by: [Signature] Date/Time: [Blank]		Relinquished by: [Signature] Date/Time: [Blank]	
Relinquished by: [Signature] Date/Time: [Blank]		Relinquished by: [Signature] Date/Time: [Blank]	
Custody Seal No.: [Blank]		Cooler Temperature(s) °C and Other Remarks: 0.4/0.8	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127746-2

SDG Number: LF #4

Login Number: 127746

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.30°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.	N/A	
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: 400-127746-2
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
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: 400-127746-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-127820-1

TestAmerica Sample Delivery Group: LF #4

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 3:51:26 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: 400-127820-1
SDG: LF #4

Job ID: 400-127820-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127820-1

Metals

Method(s) 3005A: The following sample for metals was received with an initial pH of <2. It was preserved upon receipt to the laboratory: GWA-5 (400-127820-3). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

Method(s) 6020: The post digestion spike (PDS) recoveries for preparation batch 325495 and analytical batch 326189 were outside control limits. The associated laboratory control sample (LCS), matrix spike (MS) and matrix spike duplicate (MSD) recovery were within acceptance limits.

Method(s) 7470A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with an initial pH of >2: GWA-5 (400-127820-3). The sample was preserved to the appropriate pH in the laboratory. Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.



Detection Summary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-3

Lab Sample ID: 400-127820-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.90	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.77		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00042	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00045	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4R

Lab Sample ID: 400-127820-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	4.6		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0026		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-127820-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00059	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-127820-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.33		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00058	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-15

Lab Sample ID: 400-127820-5

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-15 (Continued)

Lab Sample ID: 400-127820-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.40		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00045	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-14

Lab Sample ID: 400-127820-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.0		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.52		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00046	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-16

Lab Sample ID: 400-127820-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.39		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00059	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-127820-8

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
Sulfate	0.75	J	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	2.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0018	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-12

Lab Sample ID: 400-127820-9

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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-12 (Continued)

Lab Sample ID: 400-127820-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.61		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0019	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00077	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-17

Lab Sample ID: 400-127820-10

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	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00056	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00071	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0021	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00081	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-10

Lab Sample ID: 400-127820-11

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	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	14		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0057		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0048	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00024	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-127820-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.39		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.4		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-11 (Continued)

Lab Sample ID: 400-127820-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0051		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0044	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00047	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	60		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-127820-13

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
Sulfate	0.91	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.21	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00063	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-127820-14

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-127820-15

No Detections.

Client Sample ID: GWC-20

Lab Sample ID: 400-127820-16

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	2.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0023	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-21

Lab Sample ID: 400-127820-17

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
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Client Sample ID: GWC-21 (Continued)

Lab Sample ID: 400-127820-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00084	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00064	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00062	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.35		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.015		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00079	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Molybdenum	0.0034	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00043	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00016	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-127820-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00069	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

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: 400-127820-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127820-1	GWA-3	Water	09/27/16 09:10	09/28/16 09:05
400-127820-2	GWA-4R	Water	09/27/16 09:05	09/28/16 09:05
400-127820-3	GWA-5	Water	09/27/16 08:52	09/28/16 09:05
400-127820-4	GWA-13	Water	09/27/16 10:14	09/28/16 09:05
400-127820-5	GWA-15	Water	09/27/16 10:50	09/28/16 09:05
400-127820-6	GWA-14	Water	09/27/16 11:04	09/28/16 09:05
400-127820-7	GWA-16	Water	09/27/16 11:10	09/28/16 09:05
400-127820-8	GWC-1	Water	09/27/16 12:28	09/28/16 09:05
400-127820-9	GWC-12	Water	09/27/16 12:26	09/28/16 09:05
400-127820-10	GWC-17	Water	09/27/16 13:20	09/28/16 09:05
400-127820-11	GWC-10	Water	09/27/16 14:20	09/28/16 09:05
400-127820-12	GWC-11	Water	09/27/16 15:04	09/28/16 09:05
400-127820-13	GWC-9	Water	09/27/16 15:20	09/28/16 09:05
400-127820-14	FB-1	Water	09/27/16 15:10	09/28/16 09:05
400-127820-15	FERB-1	Water	09/27/16 15:30	09/28/16 09:05
400-127820-16	GWC-20	Water	09/27/16 17:05	09/28/16 09:05
400-127820-17	GWC-21	Water	09/27/16 16:49	09/28/16 09:05
400-127820-18	DUP-1	Water	09/27/16 00:00	09/28/16 09:05

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 09/27/16 09:10
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.3		1.0	0.89	mg/L			10/11/16 02:45	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 02:45	1
Sulfate	0.90	J	1.0	0.70	mg/L			10/11/16 02:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:02	5
Barium	0.016		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:02	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:02	5
Calcium	0.77		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:02	5
Cobalt	0.00042	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:02	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:02	5
Selenium	0.00045	J	0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Client Sample ID: GWA-4R

Lab Sample ID: 400-127820-2

Date Collected: 09/27/16 09:05

Matrix: Water

Date Received: 09/28/16 09:05

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			10/11/16 04:39	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 04:39	1
Sulfate	4.6		1.0	0.70	mg/L			10/11/16 04:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:07	5
Arsenic	0.0026		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:07	5
Barium	0.035		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:07	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:07	5
Calcium	3.4		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:07	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:07	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:07	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-5
Date Collected: 09/27/16 08:52
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			10/11/16 05:02	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 05:02	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 05:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:11	5
Barium	0.038		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:11	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:11	5
Calcium	2.9		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:11	5
Cobalt	0.00059 J		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:11	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-13

Date Collected: 09/27/16 10:14

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.8		1.0	0.89	mg/L			10/11/16 05:24	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 05:24	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 05:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:16	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:16	5
Barium	0.015		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:16	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:16	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:16	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:16	5
Calcium	0.33		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:16	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:16	5
Cobalt	0.00058 J		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:16	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:16	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:16	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:16	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:16	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:16	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-15

Date Collected: 09/27/16 10:50

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-5

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			10/11/16 05:47	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 05:47	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 05:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:20	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:20	5
Barium	0.023		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:20	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:20	5
Calcium	0.40		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:20	5
Cobalt	0.00045 J		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:20	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:20	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 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		10/05/16 09:12	10/10/16 12:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-14
Date Collected: 09/27/16 11:04
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			10/11/16 06:10	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 06:10	1
Sulfate	2.0		1.0	0.70	mg/L			10/11/16 06:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:25	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:25	5
Barium	0.010		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:25	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:25	5
Calcium	0.52		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:25	5
Cobalt	0.00046 J		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:25	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 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		10/05/16 09:12	10/10/16 12:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-16

Date Collected: 09/27/16 11:10

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-7

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			10/11/16 06:33	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 06:33	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 06:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:29	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:29	5
Barium	0.021		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:29	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:29	5
Calcium	0.39		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:29	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:29	5
Cobalt	0.00059	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:29	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-1
Date Collected: 09/27/16 12:28
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-8
Matrix: Water

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			10/11/16 06:56	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 06:56	1
Sulfate	0.75	J	1.0	0.70	mg/L			10/11/16 06:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 18:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:34	5
Barium	0.042		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:34	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:34	5
Calcium	2.3		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:34	5
Chromium	0.0018	J	0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:34	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-12
Date Collected: 09/27/16 12:26
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-9
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			10/11/16 07:18	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 07:18	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 07:18	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		10/05/16 12:29	10/10/16 18:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 18:56	5
Barium	0.011		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 18:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:56	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 18:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 18:56	5
Calcium	0.61		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 18:56	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 18:56	5
Cobalt	0.00077	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 18:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 18:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 18:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 18:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 18:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 18:56	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		10/05/16 09:12	10/10/16 12:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Client Sample ID: GWC-17

Date Collected: 09/27/16 13:20

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			10/11/16 08:27	1
Fluoride	0.14	J	0.20	0.082	mg/L			10/11/16 08:27	1
Sulfate	1.5		1.0	0.70	mg/L			10/11/16 08:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 19:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 19:01	5
Barium	0.016		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 19:01	5
Beryllium	0.00056	J	0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:01	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 19:01	5
Cadmium	0.00071	J	0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:01	5
Calcium	1.9		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 19:01	5
Chromium	0.0021	J	0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 19:01	5
Cobalt	0.00081	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 19:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 19:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 19:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 19:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 19:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 19:01	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-10

Date Collected: 09/27/16 14:20

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-11

Matrix: Water

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			10/11/16 08:50	1
Fluoride	0.17	J	0.20	0.082	mg/L			10/11/16 08:50	1
Sulfate	3.2		1.0	0.70	mg/L			10/11/16 08:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 19:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 19:05	5
Barium	0.014		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 19:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:05	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 19:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:05	5
Calcium	14		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 19:05	5
Chromium	0.0057		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 19:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 19:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 19:05	5
Lithium	0.0048	J	0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 19:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 19:05	5
Selenium	0.00024	J	0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 19:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 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		10/05/16 09:12	10/10/16 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Client Sample ID: GWC-11
Date Collected: 09/27/16 15:04
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-12
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.9		1.0	0.89	mg/L			10/11/16 09:35	1
Fluoride	0.39		0.20	0.082	mg/L			10/11/16 09:35	1
Sulfate	4.4		1.0	0.70	mg/L			10/11/16 09:35	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		10/05/16 12:29	10/10/16 19:10	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 19:10	5
Barium	0.010		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 19:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:10	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 19:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:10	5
Calcium	8.7		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 19:10	5
Chromium	0.0051		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 19:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 19:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 19:10	5
Lithium	0.0044	J	0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 19:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 19:10	5
Selenium	0.00047	J	0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 19:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 19:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 12:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	60		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-9
Date Collected: 09/27/16 15:20
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-13
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			10/11/16 09:58	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 09:58	1
Sulfate	0.91	J	1.0	0.70	mg/L			10/11/16 09:58	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		10/05/16 12:29	10/10/16 19:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 19:14	5
Barium	0.029		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 19:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:14	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 19:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:14	5
Calcium	0.21	J	0.25	0.13	mg/L		10/05/16 12:29	10/10/16 19:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 19:14	5
Cobalt	0.00063	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 19:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 19:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 19:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 19:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 19:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 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		10/05/16 09:12	10/10/16 12:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: FB-1
Date Collected: 09/27/16 15:10
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-14
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/11/16 10:21	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 10:21	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 10:21	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		10/05/16 12:29	10/10/16 19:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 19:37	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 19:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:37	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 19:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:37	5
Calcium	<0.13		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 19:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 19:37	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 19:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 19:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 19:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 19:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 19:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 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		10/05/16 09:12	10/10/16 13:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: FERB-1

Date Collected: 09/27/16 15:30

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-15

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/11/16 10:44	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 10:44	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 10:44	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		10/05/16 12:29	10/10/16 19:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 19:59	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 19:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:59	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 19:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 19:59	5
Calcium	<0.13		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 19:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 19:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 19:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 19:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 19:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 19:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 19:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 19:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-20

Date Collected: 09/27/16 17:05

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-16

Matrix: Water

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			10/11/16 11:07	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 11:07	1
Sulfate	2.6		1.0	0.70	mg/L			10/11/16 11:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 20:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 20:04	5
Barium	0.023		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 20:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 20:04	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 20:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 20:04	5
Calcium	1.4		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 20:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 20:04	5
Cobalt	0.0023	J	0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 20:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 20:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 20:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 20:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 20:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 20:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Client Sample ID: GWC-21
Date Collected: 09/27/16 16:49
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-17
Matrix: Water

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			10/11/16 11:29	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 11:29	1
Sulfate	1.1		1.0	0.70	mg/L			10/11/16 11:29	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		10/05/16 12:29	10/10/16 20:08	5
Arsenic	0.00084	J	0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 20:08	5
Barium	0.018		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 20:08	5
Beryllium	0.00064	J	0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 20:08	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 20:08	5
Cadmium	0.00062	J	0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 20:08	5
Calcium	1.3		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 20:08	5
Chromium	0.35		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 20:08	5
Cobalt	0.015		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 20:08	5
Lead	0.00079	J	0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 20:08	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 20:08	5
Molybdenum	0.0034	J	0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 20:08	5
Selenium	0.00043	J	0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 20:08	5
Thallium	0.00016	J	0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 20:08	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 09:12	10/10/16 13:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			09/30/16 14:28	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 09/27/16 00:00
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-18
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			10/11/16 11:52	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 11:52	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 11:52	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		10/05/16 12:29	10/10/16 20:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 20:13	5
Barium	0.037		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 20:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 20:13	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 20:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 20:13	5
Calcium	2.4		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 20:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 20:13	5
Cobalt	0.00069 J		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 20:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 20:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 20:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 20:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 20:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 20:13	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:12	10/10/16 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			09/30/16 14:28	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

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.

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: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-3

Date Collected: 09/27/16 09:10

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326212	10/11/16 02:45	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:02	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWA-4R

Date Collected: 09/27/16 09:05

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326212	10/11/16 04:39	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:07	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWA-5

Date Collected: 09/27/16 08:52

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326212	10/11/16 05:02	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:11	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWA-13

Date Collected: 09/27/16 10:14

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326212	10/11/16 05:24	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:16	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWA-15

Lab Sample ID: 400-127820-5

Date Collected: 09/27/16 10:50

Matrix: Water

Date Received: 09/28/16 09:05

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 05:47	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:20	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWA-14

Lab Sample ID: 400-127820-6

Date Collected: 09/27/16 11:04

Matrix: Water

Date Received: 09/28/16 09:05

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 06:10	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:25	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWA-16

Lab Sample ID: 400-127820-7

Date Collected: 09/27/16 11:10

Matrix: Water

Date Received: 09/28/16 09:05

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 06:33	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:29	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-127820-8

Date Collected: 09/27/16 12:28

Matrix: Water

Date Received: 09/28/16 09:05

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 06:56	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:34	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-12

Lab Sample ID: 400-127820-9

Date Collected: 09/27/16 12:26

Matrix: Water

Date Received: 09/28/16 09:05

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 07:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 18:56	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWC-17

Lab Sample ID: 400-127820-10

Date Collected: 09/27/16 13:20

Matrix: Water

Date Received: 09/28/16 09:05

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 08:27	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 19:01	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWC-10

Lab Sample ID: 400-127820-11

Date Collected: 09/27/16 14:20

Matrix: Water

Date Received: 09/28/16 09:05

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 08:50	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 19:05	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWC-11

Lab Sample ID: 400-127820-12

Date Collected: 09/27/16 15:04

Matrix: Water

Date Received: 09/28/16 09:05

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 09:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 19:10	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-9

Lab Sample ID: 400-127820-13

Date Collected: 09/27/16 15:20

Matrix: Water

Date Received: 09/28/16 09:05

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 09:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 19:14	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 12:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-127820-14

Date Collected: 09/27/16 15:10

Matrix: Water

Date Received: 09/28/16 09:05

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 10:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 19:37	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 13:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-127820-15

Date Collected: 09/27/16 15:30

Matrix: Water

Date Received: 09/28/16 09:05

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 10:44	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 19:59	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: GWC-20

Lab Sample ID: 400-127820-16

Date Collected: 09/27/16 17:05

Matrix: Water

Date Received: 09/28/16 09:05

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 11:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 20:04	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Client Sample ID: GWC-21

Lab Sample ID: 400-127820-17

Date Collected: 09/27/16 16:49

Matrix: Water

Date Received: 09/28/16 09:05

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 11:29	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 20:08	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 13:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	JLB	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-127820-18

Date Collected: 09/27/16 00:00

Matrix: Water

Date Received: 09/28/16 09:05

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 11:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325495	10/05/16 12:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	326189	10/10/16 20:13	AJR	TAL PEN
Total/NA	Prep	7470A			325444	10/05/16 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 13:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324862	09/30/16 14:28	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: 400-127820-1
SDG: LF #4

HPLC/IC

Analysis Batch: 326212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total/NA	Water	300.0	
400-127820-2	GWA-4R	Total/NA	Water	300.0	
400-127820-3	GWA-5	Total/NA	Water	300.0	
400-127820-4	GWA-13	Total/NA	Water	300.0	
400-127820-5	GWA-15	Total/NA	Water	300.0	
400-127820-6	GWA-14	Total/NA	Water	300.0	
400-127820-7	GWA-16	Total/NA	Water	300.0	
400-127820-8	GWC-1	Total/NA	Water	300.0	
400-127820-9	GWC-12	Total/NA	Water	300.0	
400-127820-10	GWC-17	Total/NA	Water	300.0	
400-127820-11	GWC-10	Total/NA	Water	300.0	
400-127820-12	GWC-11	Total/NA	Water	300.0	
400-127820-13	GWC-9	Total/NA	Water	300.0	
400-127820-14	FB-1	Total/NA	Water	300.0	
400-127820-15	FERB-1	Total/NA	Water	300.0	
400-127820-16	GWC-20	Total/NA	Water	300.0	
400-127820-17	GWC-21	Total/NA	Water	300.0	
400-127820-18	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	
400-127820-1 MS	GWA-3	Total/NA	Water	300.0	
400-127820-1 MSD	GWA-3	Total/NA	Water	300.0	
400-127820-11 MS	GWC-10	Total/NA	Water	300.0	

Metals

Prep Batch: 325444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total/NA	Water	7470A	
400-127820-2	GWA-4R	Total/NA	Water	7470A	
400-127820-3	GWA-5	Total/NA	Water	7470A	
400-127820-4	GWA-13	Total/NA	Water	7470A	
400-127820-5	GWA-15	Total/NA	Water	7470A	
400-127820-6	GWA-14	Total/NA	Water	7470A	
400-127820-7	GWA-16	Total/NA	Water	7470A	
400-127820-8	GWC-1	Total/NA	Water	7470A	
400-127820-9	GWC-12	Total/NA	Water	7470A	
400-127820-10	GWC-17	Total/NA	Water	7470A	
400-127820-11	GWC-10	Total/NA	Water	7470A	
400-127820-12	GWC-11	Total/NA	Water	7470A	
400-127820-13	GWC-9	Total/NA	Water	7470A	
400-127820-14	FB-1	Total/NA	Water	7470A	
400-127820-15	FERB-1	Total/NA	Water	7470A	
400-127820-16	GWC-20	Total/NA	Water	7470A	
400-127820-17	GWC-21	Total/NA	Water	7470A	
400-127820-18	DUP-1	Total/NA	Water	7470A	
MB 400-325444/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-325444/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-127820-13 MS	GWC-9	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Metals (Continued)

Prep Batch: 325444 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-13 MSD	GWC-9	Total/NA	Water	7470A	

Prep Batch: 325495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total Recoverable	Water	3005A	
400-127820-2	GWA-4R	Total Recoverable	Water	3005A	
400-127820-3	GWA-5	Total Recoverable	Water	3005A	
400-127820-4	GWA-13	Total Recoverable	Water	3005A	
400-127820-5	GWA-15	Total Recoverable	Water	3005A	
400-127820-6	GWA-14	Total Recoverable	Water	3005A	
400-127820-7	GWA-16	Total Recoverable	Water	3005A	
400-127820-8	GWC-1	Total Recoverable	Water	3005A	
400-127820-9	GWC-12	Total Recoverable	Water	3005A	
400-127820-10	GWC-17	Total Recoverable	Water	3005A	
400-127820-11	GWC-10	Total Recoverable	Water	3005A	
400-127820-12	GWC-11	Total Recoverable	Water	3005A	
400-127820-13	GWC-9	Total Recoverable	Water	3005A	
400-127820-14	FB-1	Total Recoverable	Water	3005A	
400-127820-15	FERB-1	Total Recoverable	Water	3005A	
400-127820-16	GWC-20	Total Recoverable	Water	3005A	
400-127820-17	GWC-21	Total Recoverable	Water	3005A	
400-127820-18	DUP-1	Total Recoverable	Water	3005A	
MB 400-325495/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-325495/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-127820-13 MS	GWC-9	Total Recoverable	Water	3005A	
400-127820-13 MSD	GWC-9	Total Recoverable	Water	3005A	

Analysis Batch: 326133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total/NA	Water	7470A	325444
400-127820-2	GWA-4R	Total/NA	Water	7470A	325444
400-127820-3	GWA-5	Total/NA	Water	7470A	325444
400-127820-4	GWA-13	Total/NA	Water	7470A	325444
400-127820-5	GWA-15	Total/NA	Water	7470A	325444
400-127820-6	GWA-14	Total/NA	Water	7470A	325444
400-127820-7	GWA-16	Total/NA	Water	7470A	325444
400-127820-8	GWC-1	Total/NA	Water	7470A	325444
400-127820-9	GWC-12	Total/NA	Water	7470A	325444
400-127820-10	GWC-17	Total/NA	Water	7470A	325444
400-127820-11	GWC-10	Total/NA	Water	7470A	325444
400-127820-12	GWC-11	Total/NA	Water	7470A	325444
400-127820-13	GWC-9	Total/NA	Water	7470A	325444
400-127820-14	FB-1	Total/NA	Water	7470A	325444
400-127820-15	FERB-1	Total/NA	Water	7470A	325444
400-127820-16	GWC-20	Total/NA	Water	7470A	325444
400-127820-17	GWC-21	Total/NA	Water	7470A	325444
400-127820-18	DUP-1	Total/NA	Water	7470A	325444
MB 400-325444/14-A	Method Blank	Total/NA	Water	7470A	325444
LCS 400-325444/15-A	Lab Control Sample	Total/NA	Water	7470A	325444
400-127820-13 MS	GWC-9	Total/NA	Water	7470A	325444
400-127820-13 MSD	GWC-9	Total/NA	Water	7470A	325444

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Analysis Batch: 326189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total Recoverable	Water	6020	325495
400-127820-2	GWA-4R	Total Recoverable	Water	6020	325495
400-127820-3	GWA-5	Total Recoverable	Water	6020	325495
400-127820-4	GWA-13	Total Recoverable	Water	6020	325495
400-127820-5	GWA-15	Total Recoverable	Water	6020	325495
400-127820-6	GWA-14	Total Recoverable	Water	6020	325495
400-127820-7	GWA-16	Total Recoverable	Water	6020	325495
400-127820-8	GWC-1	Total Recoverable	Water	6020	325495
400-127820-9	GWC-12	Total Recoverable	Water	6020	325495
400-127820-10	GWC-17	Total Recoverable	Water	6020	325495
400-127820-11	GWC-10	Total Recoverable	Water	6020	325495
400-127820-12	GWC-11	Total Recoverable	Water	6020	325495
400-127820-13	GWC-9	Total Recoverable	Water	6020	325495
400-127820-14	FB-1	Total Recoverable	Water	6020	325495
400-127820-15	FERB-1	Total Recoverable	Water	6020	325495
400-127820-16	GWC-20	Total Recoverable	Water	6020	325495
400-127820-17	GWC-21	Total Recoverable	Water	6020	325495
400-127820-18	DUP-1	Total Recoverable	Water	6020	325495
MB 400-325495/1-A ^5	Method Blank	Total Recoverable	Water	6020	325495
LCS 400-325495/2-A	Lab Control Sample	Total Recoverable	Water	6020	325495
400-127820-13 MS	GWC-9	Total Recoverable	Water	6020	325495
400-127820-13 MSD	GWC-9	Total Recoverable	Water	6020	325495

General Chemistry

Analysis Batch: 324862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total/NA	Water	SM 2540C	
400-127820-2	GWA-4R	Total/NA	Water	SM 2540C	
400-127820-3	GWA-5	Total/NA	Water	SM 2540C	
400-127820-4	GWA-13	Total/NA	Water	SM 2540C	
400-127820-5	GWA-15	Total/NA	Water	SM 2540C	
400-127820-6	GWA-14	Total/NA	Water	SM 2540C	
400-127820-7	GWA-16	Total/NA	Water	SM 2540C	
400-127820-8	GWC-1	Total/NA	Water	SM 2540C	
400-127820-9	GWC-12	Total/NA	Water	SM 2540C	
400-127820-10	GWC-17	Total/NA	Water	SM 2540C	
400-127820-11	GWC-10	Total/NA	Water	SM 2540C	
400-127820-12	GWC-11	Total/NA	Water	SM 2540C	
400-127820-13	GWC-9	Total/NA	Water	SM 2540C	
400-127820-14	FB-1	Total/NA	Water	SM 2540C	
400-127820-15	FERB-1	Total/NA	Water	SM 2540C	
400-127820-16	GWC-20	Total/NA	Water	SM 2540C	
400-127820-17	GWC-21	Total/NA	Water	SM 2540C	
400-127820-18	DUP-1	Total/NA	Water	SM 2540C	
MB 400-324862/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-324862/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127820-1 DU	GWA-3	Total/NA	Water	SM 2540C	
400-127820-11 DU	GWC-10	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

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

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: 400-127820-1 MS
Matrix: Water
Analysis Batch: 326212

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.3		10.0	15.9		mg/L		96	80 - 120
Fluoride	<0.082		10.0	10.6		mg/L		106	80 - 120
Sulfate	0.90	J	10.0	11.2		mg/L		103	80 - 120

Lab Sample ID: 400-127820-1 MSD
Matrix: Water
Analysis Batch: 326212

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	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: 400-127820-11 MS
Matrix: Water
Analysis Batch: 326212

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.1		10.0	16.7		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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-325495/1-A ^5
Matrix: Water
Analysis Batch: 326189

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 325495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 12:29	10/10/16 17:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 12:29	10/10/16 17:53	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/05/16 12:29	10/10/16 17:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 17:53	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 12:29	10/10/16 17:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 12:29	10/10/16 17:53	5
Calcium	<0.13		0.25	0.13	mg/L		10/05/16 12:29	10/10/16 17:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 12:29	10/10/16 17:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 12:29	10/10/16 17:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 12:29	10/10/16 17:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 12:29	10/10/16 17:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 12:29	10/10/16 17:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 12:29	10/10/16 17:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 12:29	10/10/16 17:53	5

Lab Sample ID: LCS 400-325495/2-A
Matrix: Water
Analysis Batch: 326189

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 325495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0497		mg/L		99	80 - 120
Arsenic	0.0500	0.0503		mg/L		101	80 - 120
Barium	0.0500	0.0468		mg/L		94	80 - 120
Beryllium	0.0500	0.0464		mg/L		93	80 - 120
Boron	0.100	0.100		mg/L		100	80 - 120
Cadmium	0.0500	0.0478		mg/L		96	80 - 120
Calcium	5.00	4.98		mg/L		100	80 - 120
Chromium	0.0500	0.0492		mg/L		98	80 - 120
Cobalt	0.0500	0.0478		mg/L		96	80 - 120
Lead	0.0500	0.0471		mg/L		94	80 - 120
Lithium	0.0500	0.0505		mg/L		101	80 - 120
Molybdenum	0.0500	0.0484		mg/L		97	80 - 120
Selenium	0.0500	0.0500		mg/L		100	80 - 120
Thallium	0.0100	0.00970		mg/L		97	80 - 120

Lab Sample ID: 400-127820-13 MS
Matrix: Water
Analysis Batch: 326189

Client Sample ID: GWC-9
Prep Type: Total Recoverable
Prep Batch: 325495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0509		mg/L		102	75 - 125
Arsenic	<0.00046		0.0500	0.0503		mg/L		101	75 - 125
Barium	0.029		0.0500	0.0761		mg/L		95	75 - 125
Beryllium	<0.00034		0.0500	0.0455		mg/L		91	75 - 125
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125
Cadmium	<0.00034		0.0500	0.0461		mg/L		92	75 - 125
Calcium	0.21	J	5.00	5.16		mg/L		99	75 - 125
Chromium	<0.0011		0.0500	0.0497		mg/L		99	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127820-1
SDG: LF #4

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

Lab Sample ID: 400-127820-13 MS
Matrix: Water
Analysis Batch: 326189

Client Sample ID: GWC-9
Prep Type: Total Recoverable
Prep Batch: 325495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00063	J	0.0500	0.0547		mg/L		108	75 - 125
Lead	<0.00035		0.0500	0.0435		mg/L		87	75 - 125
Lithium	<0.0032		0.0500	0.0504		mg/L		101	75 - 125
Molybdenum	<0.00085		0.0500	0.0484		mg/L		97	75 - 125
Selenium	<0.00024		0.0500	0.0498		mg/L		100	75 - 125
Thallium	<0.000085		0.0100	0.00948		mg/L		95	75 - 125

Lab Sample ID: 400-127820-13 MSD
Matrix: Water
Analysis Batch: 326189

Client Sample ID: GWC-9
Prep Type: Total Recoverable
Prep Batch: 325495

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0501		mg/L		100	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0502		mg/L		100	75 - 125	0	20
Barium	0.029		0.0500	0.0768		mg/L		96	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0450		mg/L		90	75 - 125	1	20
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125	6	20
Cadmium	<0.00034		0.0500	0.0463		mg/L		93	75 - 125	0	20
Calcium	0.21	J	5.00	5.25		mg/L		101	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0493		mg/L		99	75 - 125	1	20
Cobalt	0.00063	J	0.0500	0.0546		mg/L		108	75 - 125	0	20
Lead	<0.00035		0.0500	0.0437		mg/L		87	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0504		mg/L		101	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0483		mg/L		97	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0496		mg/L		99	75 - 125	0	20
Thallium	<0.000085		0.0100	0.00957		mg/L		96	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-325444/14-A
Matrix: Water
Analysis Batch: 326133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 325444

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 09:12	10/10/16 12:06	1

Lab Sample ID: LCS 400-325444/15-A
Matrix: Water
Analysis Batch: 326133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 325444

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00109		mg/L		109	80 - 120

Lab Sample ID: 400-127820-13 MS
Matrix: Water
Analysis Batch: 326133

Client Sample ID: GWC-9
Prep Type: Total/NA
Prep Batch: 325444

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00206		mg/L		103	80 - 120

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QC Sample Results

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Lab Sample ID: 400-127820-13 MSD
Matrix: Water
Analysis Batch: 326133

Client Sample ID: GWC-9
Prep Type: Total/NA
Prep Batch: 325444
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00204		mg/L		101	80 - 120	1	20

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

Lab Sample ID: MB 400-324862/1
Matrix: Water
Analysis Batch: 324862

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/30/16 14:28	1

Lab Sample ID: LCS 400-324862/2
Matrix: Water
Analysis Batch: 324862

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	260		mg/L		89	78 - 122

Lab Sample ID: 400-127820-1 DU
Matrix: Water
Analysis Batch: 324862

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	30		30.0		mg/L		0	5

Lab Sample ID: 400-127820-11 DU
Matrix: Water
Analysis Batch: 324862

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	100		104		mg/L		2	5

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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Jolu Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE 810185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: LFA		Lab P.M.: Whitfire, Cheyenne R E-Mail: cheyenne.whitfire@testamericainc.com Carrier/Tracking No(s): Job #: 400-121820	
Date Date Requested: TAT Requested (days): PO #: WO #: Project #: SSON#:		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-646 9916 & 9320 TDS - SM 2640C; Cl.F. 804 - EPA 300 Total Nitrogen (as NO ₃) Total Phosphorus (as PO ₄)	
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=Water, S=solid, O=Organic, I=Inorganic, A=Asbestos)		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsHClO ₂ P - Na ₂ O ₄ S Q - Na ₂ SO ₃ R - Na ₂ S ₂ O ₃ S - H ₂ SO ₄ T - TSP Doublehydrate U - Asistone V - MCAA W - pH 4-5 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		Special Instructions/Note: 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 Pexilia and Heath McConkle	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: Will King Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]	
Date/Time: 9/27/16 08:05 Date/Time: 9/27/16 08:05 Date/Time: 9/27/16 10:05		Received by: J. Johnson Received by: [Signature] Received by: [Signature]	
Date: 9/27/16 Date: 9/27/16 Date: 9/27/16		Company: ERM Company: [Signature] Company: [Signature]	
Custody Seal No.: A Yes .o		Cooler Temperature(s) °C and Other Remarks: 0.0°C IR-S	



TestAmerica Pensacola
 3355 McLemore's 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: Jolju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State: GA, ZIP: 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant: McIntosh Site: LF4		Lab PIV: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Sample: ERM - I, Payne, M. Rogers, T. Mandel Phone: 878-486-2700 Date: 9/27/16		Camer Tracking No(s): Page: 2 of 2 Job #: 400-127820	
Analysis Requested TDS - SM 2640C; C.F.F. 804 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-940 9415 & 9420		Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - HNO3 G - Amsthor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: Total Number of Containers: 3	
Sample Identification GWL-11 GWL-9 FB-1 FERR-1 GWL-20 GWL-21 DUP-1		Sample Date 9/27/16 9/27/16 9/27/16 9/27/16 9/27/16 9/27/16		Sample Time 1504 1520 1510 1530 1705 1649	
Matrix (W=Water, S=Soil, C=Composite, A=Air) W W W W W W W		Sample Type (C=Comp, G=grab) G G G G G G		Preservation Codes 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)					
Empty Kit Relinquished by:					
Relinquished by: Will Vigo Date/Time: 9/28/16 0905 Company: ERM		Relinquished by: [Signature] Date/Time: 9/28/16 10:05 Company: TA		Relinquished by: [Signature] Date/Time: 9/28/16 9:05 Company: TA	
Custody Seal No.: A Yes <input type="checkbox"/> No <input type="checkbox"/>					
Cooler Temperature(s) °C and Other Remarks: 0.0 °C IR-5					

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127820-1

SDG Number: LF #4

Login Number: 127820

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C, 0.0°C, IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

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

TestAmerica Job ID: 400-127820-1
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

* Certification renewal pending - certification considered valid.



TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-127820-2

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

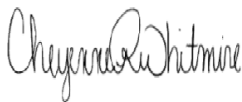
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/26/2016 3:50:04 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: 400-127820-2
SDG: LF #4

Job ID: 400-127820-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127820-2

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-272591: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-3 (400-127820-1), GWA-4R (400-127820-2), GWA-5 (400-127820-3), GWA-13 (400-127820-4), GWA-15 (400-127820-5), GWA-14 (400-127820-6), GWA-16 (400-127820-7), GWC-1 (400-127820-8), GWC-12 (400-127820-9), GWC-17 (400-127820-10), GWC-10 (400-127820-11), GWC-11 (400-127820-12), GWC-9 (400-127820-13), FB-1 (400-127820-14), FERB-1 (400-127820-15), GWC-20 (400-127820-16), GWC-21 (400-127820-17) and DUP-1 (400-127820-18). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-272588: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-3 (400-127820-1), GWA-4R (400-127820-2), GWA-5 (400-127820-3), GWA-13 (400-127820-4), GWA-15 (400-127820-5), GWA-14 (400-127820-6), GWA-16 (400-127820-7), GWC-1 (400-127820-8), GWC-12 (400-127820-9), GWC-17 (400-127820-10), GWC-10 (400-127820-11), GWC-11 (400-127820-12), GWC-9 (400-127820-13), FB-1 (400-127820-14), FERB-1 (400-127820-15), GWC-20 (400-127820-16), GWC-21 (400-127820-17) and DUP-1 (400-127820-18). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127820-1	GWA-3	Water	09/27/16 09:10	09/28/16 09:05
400-127820-2	GWA-4R	Water	09/27/16 09:05	09/28/16 09:05
400-127820-3	GWA-5	Water	09/27/16 08:52	09/28/16 09:05
400-127820-4	GWA-13	Water	09/27/16 10:14	09/28/16 09:05
400-127820-5	GWA-15	Water	09/27/16 10:50	09/28/16 09:05
400-127820-6	GWA-14	Water	09/27/16 11:04	09/28/16 09:05
400-127820-7	GWA-16	Water	09/27/16 11:10	09/28/16 09:05
400-127820-8	GWC-1	Water	09/27/16 12:28	09/28/16 09:05
400-127820-9	GWC-12	Water	09/27/16 12:26	09/28/16 09:05
400-127820-10	GWC-17	Water	09/27/16 13:20	09/28/16 09:05
400-127820-11	GWC-10	Water	09/27/16 14:20	09/28/16 09:05
400-127820-12	GWC-11	Water	09/27/16 15:04	09/28/16 09:05
400-127820-13	GWC-9	Water	09/27/16 15:20	09/28/16 09:05
400-127820-14	FB-1	Water	09/27/16 15:10	09/28/16 09:05
400-127820-15	FERB-1	Water	09/27/16 15:30	09/28/16 09:05
400-127820-16	GWC-20	Water	09/27/16 17:05	09/28/16 09:05
400-127820-17	GWC-21	Water	09/27/16 16:49	09/28/16 09:05
400-127820-18	DUP-1	Water	09/27/16 00:00	09/28/16 09:05

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 09/27/16 09:10
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-1
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	0.554		0.124	0.134	1.00	0.119	pCi/L	09/30/16 14:26	10/24/16 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					09/30/16 14:26	10/24/16 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.312	U	0.271	0.272	1.00	0.434	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	83.4		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.866		0.298	0.304	5.00	0.434	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWA-4R

Lab Sample ID: 400-127820-2

Date Collected: 09/27/16 09:05

Matrix: Water

Date Received: 09/28/16 09:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.287		0.0868	0.0906	1.00	0.0820	pCi/L	09/30/16 14:26	10/24/16 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/30/16 14:26	10/24/16 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.112	U	0.263	0.264	1.00	0.453	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	80.7		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.400	U	0.277	0.279	5.00	0.453	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWA-5

Date Collected: 09/27/16 08:52

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-3

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	0.248		0.0818	0.0848	1.00	0.0778	pCi/L	09/30/16 14:26	10/24/16 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/30/16 14:26	10/24/16 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.597		0.353	0.357	1.00	0.541	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	77.8		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.845		0.362	0.367	5.00	0.541	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWA-13
Date Collected: 09/27/16 10:14
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-4
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	0.298		0.0909	0.0947	1.00	0.0909	pCi/L	09/30/16 14:26	10/24/16 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/30/16 14:26	10/24/16 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0706	U	0.289	0.289	1.00	0.502	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	79.6		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.368	U	0.302	0.304	5.00	0.502	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWA-15
Date Collected: 09/27/16 10:50
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-5
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	0.257		0.0936	0.0965	1.00	0.111	pCi/L	09/30/16 14:26	10/24/16 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					09/30/16 14:26	10/24/16 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0542	U	0.250	0.250	1.00	0.457	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	81.9		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.203	U	0.267	0.268	5.00	0.457	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWA-14
Date Collected: 09/27/16 11:04
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.300		0.0922	0.0961	1.00	0.0958	pCi/L	09/30/16 14:26	10/24/16 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					09/30/16 14:26	10/24/16 14:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.380	U	0.324	0.326	1.00	0.520	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	79.3		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.679		0.337	0.340	5.00	0.520	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWA-16
Date Collected: 09/27/16 11:10
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-7
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	0.277		0.102	0.105	1.00	0.127	pCi/L	09/30/16 14:26	10/24/16 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					09/30/16 14:26	10/24/16 14:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.374	U	0.297	0.299	1.00	0.471	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	81.5		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.651		0.314	0.317	5.00	0.471	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWC-1
Date Collected: 09/27/16 12:28
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-8
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	0.547		0.112	0.122	1.00	0.0742	pCi/L	09/30/16 14:26	10/24/16 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					09/30/16 14:26	10/24/16 14:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.314	U	0.288	0.289	1.00	0.464	pCi/L	09/30/16 15:23	10/19/16 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					09/30/16 15:23	10/19/16 17:55	1
Y Carrier	81.5		40 - 110					09/30/16 15:23	10/19/16 17:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.861		0.309	0.314	5.00	0.464	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWC-12

Lab Sample ID: 400-127820-9

Date Collected: 09/27/16 12:26

Matrix: Water

Date Received: 09/28/16 09:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.134		0.0678	0.0689	1.00	0.0859	pCi/L	09/30/16 14:26	10/24/16 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					09/30/16 14:26	10/24/16 14:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.315	U	0.296	0.298	1.00	0.478	pCi/L	09/30/16 15:23	10/19/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					09/30/16 15:23	10/19/16 18:21	1
Y Carrier	77.4		40 - 110					09/30/16 15:23	10/19/16 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	0.449	U	0.304	0.305	5.00	0.478	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWC-17

Lab Sample ID: 400-127820-10

Date Collected: 09/27/16 13:20

Matrix: Water

Date Received: 09/28/16 09:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.402		0.104	0.111	1.00	0.108	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.627		0.287	0.293	1.00	0.409	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	80.4		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.03		0.306	0.313	5.00	0.409	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWC-10

Lab Sample ID: 400-127820-11

Date Collected: 09/27/16 14:20

Matrix: Water

Date Received: 09/28/16 09:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.108	U	0.0789	0.0795	1.00	0.118	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.131	U	0.273	0.273	1.00	0.469	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	83.0		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.239	U	0.284	0.285	5.00	0.469	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWC-11

Date Collected: 09/27/16 15:04

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-12

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	0.0354	U	0.0537	0.0538	1.00	0.0919	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.164	U	0.314	0.315	1.00	0.533	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	83.4		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.200	U	0.319	0.319	5.00	0.533	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWC-9
Date Collected: 09/27/16 15:20
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-13
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	0.658		0.131	0.144	1.00	0.109	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.598		0.318	0.322	1.00	0.470	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	81.1		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.344	0.353	5.00	0.470	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: FB-1
Date Collected: 09/27/16 15:10
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-14
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	-0.00209	U	0.0551	0.0551	1.00	0.107	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.208	U	0.286	0.287	1.00	0.478	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	73.3		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.206	U	0.292	0.292	5.00	0.478	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: FERB-1

Lab Sample ID: 400-127820-15

Date Collected: 09/27/16 15:30

Matrix: Water

Date Received: 09/28/16 09:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0440	U	0.0485	0.0486	1.00	0.0781	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00254	U	0.244	0.244	1.00	0.440	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	78.9		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0414	U	0.249	0.249	5.00	0.440	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWC-20

Lab Sample ID: 400-127820-16

Date Collected: 09/27/16 17:05

Matrix: Water

Date Received: 09/28/16 09:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.173		0.0754	0.0769	1.00	0.0920	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.405	U	0.295	0.297	1.00	0.462	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	81.9		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.578		0.304	0.307	5.00	0.462	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: GWC-21
Date Collected: 09/27/16 16:49
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-17
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	0.287		0.0974	0.101	1.00	0.116	pCi/L	09/30/16 14:26	10/24/16 14:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					09/30/16 14:26	10/24/16 14:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.427		0.275	0.277	1.00	0.422	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	84.1		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.714		0.291	0.295	5.00	0.422	pCi/L		10/24/16 23:34	1

Client Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 09/27/16 00:00
Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-18
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.399		0.110	0.115	1.00	0.102	pCi/L	09/30/16 14:26	10/24/16 14:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.4		40 - 110					09/30/16 14:26	10/24/16 14:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0480	U	0.276	0.276	1.00	0.488	pCi/L	09/30/16 15:23	10/19/16 18:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.4		40 - 110					09/30/16 15:23	10/19/16 18:22	1
Y Carrier	90.1		40 - 110					09/30/16 15:23	10/19/16 18:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.447	U	0.297	0.299	5.00	0.488	pCi/L		10/24/16 23:34	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWA-3

Date Collected: 09/27/16 09:10

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWA-4R

Date Collected: 09/27/16 09:05

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWA-5

Date Collected: 09/27/16 08:52

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWA-13

Date Collected: 09/27/16 10:14

Date Received: 09/28/16 09:05

Lab Sample ID: 400-127820-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWA-15

Lab Sample ID: 400-127820-5

Date Collected: 09/27/16 10:50

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWA-14

Lab Sample ID: 400-127820-6

Date Collected: 09/27/16 11:04

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWA-16

Lab Sample ID: 400-127820-7

Date Collected: 09/27/16 11:10

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-127820-8

Date Collected: 09/27/16 12:28

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275153	10/19/16 17:55	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWC-12

Lab Sample ID: 400-127820-9

Date Collected: 09/27/16 12:26

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275777	10/24/16 14:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:21	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWC-17

Lab Sample ID: 400-127820-10

Date Collected: 09/27/16 13:20

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWC-10

Lab Sample ID: 400-127820-11

Date Collected: 09/27/16 14:20

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWC-11

Lab Sample ID: 400-127820-12

Date Collected: 09/27/16 15:04

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWC-9

Lab Sample ID: 400-127820-13

Date Collected: 09/27/16 15:20

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-127820-14

Date Collected: 09/27/16 15:10

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-127820-15

Date Collected: 09/27/16 15:30

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: GWC-20

Lab Sample ID: 400-127820-16

Date Collected: 09/27/16 17:05

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Client Sample ID: GWC-21

Lab Sample ID: 400-127820-17

Date Collected: 09/27/16 16:49

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-127820-18

Date Collected: 09/27/16 00:00

Matrix: Water

Date Received: 09/28/16 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			272588	09/30/16 14:26	TJT	TAL SL
Total/NA	Analysis	9315		1	275779	10/24/16 14:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			272591	09/30/16 15:23	TJT	TAL SL
Total/NA	Analysis	9320		1	275151	10/19/16 18:22	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	275841	10/24/16 23:34	ALS	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

Rad

Prep Batch: 272588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total/NA	Water	PrecSep-21	
400-127820-2	GWA-4R	Total/NA	Water	PrecSep-21	
400-127820-3	GWA-5	Total/NA	Water	PrecSep-21	
400-127820-4	GWA-13	Total/NA	Water	PrecSep-21	
400-127820-5	GWA-15	Total/NA	Water	PrecSep-21	
400-127820-6	GWA-14	Total/NA	Water	PrecSep-21	
400-127820-7	GWA-16	Total/NA	Water	PrecSep-21	
400-127820-8	GWC-1	Total/NA	Water	PrecSep-21	
400-127820-9	GWC-12	Total/NA	Water	PrecSep-21	
400-127820-10	GWC-17	Total/NA	Water	PrecSep-21	
400-127820-11	GWC-10	Total/NA	Water	PrecSep-21	
400-127820-12	GWC-11	Total/NA	Water	PrecSep-21	
400-127820-13	GWC-9	Total/NA	Water	PrecSep-21	
400-127820-14	FB-1	Total/NA	Water	PrecSep-21	
400-127820-15	FERB-1	Total/NA	Water	PrecSep-21	
400-127820-16	GWC-20	Total/NA	Water	PrecSep-21	
400-127820-17	GWC-21	Total/NA	Water	PrecSep-21	
400-127820-18	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-272588/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-272588/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-272588/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 272591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127820-1	GWA-3	Total/NA	Water	PrecSep_0	
400-127820-2	GWA-4R	Total/NA	Water	PrecSep_0	
400-127820-3	GWA-5	Total/NA	Water	PrecSep_0	
400-127820-4	GWA-13	Total/NA	Water	PrecSep_0	
400-127820-5	GWA-15	Total/NA	Water	PrecSep_0	
400-127820-6	GWA-14	Total/NA	Water	PrecSep_0	
400-127820-7	GWA-16	Total/NA	Water	PrecSep_0	
400-127820-8	GWC-1	Total/NA	Water	PrecSep_0	
400-127820-9	GWC-12	Total/NA	Water	PrecSep_0	
400-127820-10	GWC-17	Total/NA	Water	PrecSep_0	
400-127820-11	GWC-10	Total/NA	Water	PrecSep_0	
400-127820-12	GWC-11	Total/NA	Water	PrecSep_0	
400-127820-13	GWC-9	Total/NA	Water	PrecSep_0	
400-127820-14	FB-1	Total/NA	Water	PrecSep_0	
400-127820-15	FERB-1	Total/NA	Water	PrecSep_0	
400-127820-16	GWC-20	Total/NA	Water	PrecSep_0	
400-127820-17	GWC-21	Total/NA	Water	PrecSep_0	
400-127820-18	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-272591/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-272591/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-272591/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-127820-2
SDG: LF #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-272588/1-A
Matrix: Water
Analysis Batch: 275778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272588

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01860	U	0.0604	0.0605	1.00	0.110	pCi/L	09/30/16 14:26	10/24/16 14:31	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					09/30/16 14:26	10/24/16 14:31	1

Lab Sample ID: LCS 160-272588/2-A
Matrix: Water
Analysis Batch: 275777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272588

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	12.63		1.24	1.00	0.0823	pCi/L	114	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.6		40 - 110						

Lab Sample ID: LCSD 160-272588/3-A
Matrix: Water
Analysis Batch: 275777

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272588

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	10.20		1.02	1.00	0.0977	pCi/L	92	68 - 137	1.07	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	94.9		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-272591/1-A
Matrix: Water
Analysis Batch: 275153

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272591

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2855	U	0.296	0.297	1.00	0.484	pCi/L	09/30/16 15:23	10/19/16 17:47	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					09/30/16 15:23	10/19/16 17:47	1
Y Carrier	92.0		40 - 110					09/30/16 15:23	10/19/16 17:47	1

QC Sample Results

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

TestAmerica Job ID: 400-127820-2
 SDG: LF #4

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

Lab Sample ID: LCS 160-272591/2-A
Matrix: Water
Analysis Batch: 275153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272591

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.4	17.09		1.81	1.00	0.420	pCi/L	119	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.6		40 - 110
Y Carrier	84.5		40 - 110

Lab Sample ID: LCSD 160-272591/3-A
Matrix: Water
Analysis Batch: 275153

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272591

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.4	16.77		1.78	1.00	0.431	pCi/L	116	56 - 140	0.09	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	94.9		40 - 110
Y Carrier	84.1		40 - 110

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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Jolu Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE 810185 City: Atlanta State, Zip: GA, 30308 Phone: 404-508-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: LFA		Lab P.M.: Whitfire, Cheyenne R E-Mail: cheyenne.whitfire@testamericainc.com Carrier/Tracking No(s): Job #: 400-121820	
Date Date Requested: TAT Requested (days): PO #: WO #: Project #: SSON#: Date: 9/23/16		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 TDS - SM 2640C; Cl, F, SO4 - EPA 300 Radium 226 & 228 - SW-846 9916 & 9320	
Sample Identification Sample ID: GWA-3 Sample Type: G Sample Time: 0910 Sample Date: 9/23/16		Matrix: W 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:	
Sample ID: GWA-4R Sample Type: G Sample Time: 0905 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWA-5 Sample Type: G Sample Time: 0852 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWA-13 Sample Type: G Sample Time: 1014 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWA-15 Sample Type: G Sample Time: 1050 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWA-14 Sample Type: G Sample Time: 1104 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWA-16 Sample Type: G Sample Time: 1110 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWC-1 Sample Type: G Sample Time: 1228 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWC-12 Sample Type: G Sample Time: 1226 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWC-17 Sample Type: G Sample Time: 1320 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
Sample ID: GWC-10 Sample Type: G Sample Time: 1420 Sample Date: 9/23/16		Matrix: W Preservation Codes:	
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: Will King Relinquished by: [Signature] Relinquished by: [Signature]		Received by: J. Johnson Date/Time: 9/28/16 0905 Company: TA	
Relinquished by: [Signature] Date/Time: 9/28/16 10:05 Company: TA		Received by: [Signature] Date/Time: 9/28/16 10:05 Company: TA	
Relinquished by: [Signature]		Received by: [Signature]	
Custody Seal No.: A Yes .o		Cooler Temperature(s) °C and Other Remarks: 0.0°C IR-S	



TestAmerica Pensacola
 3355 McLemore's 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: Jolju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State: GA, ZIP: 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant: McIntosh Site: LF4		Lab PIV: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Sample: ERM - I, Payne, M. Rogers, T. Mandel Phone: 878-486-2700 Date: W.V. 1/30 W.V. 2/17		Camper Tracking No(s): Page: 2 of 2 Job #: 400-127820	
Analysis Requested TDS - SM 2640C; C.F.F. 804 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-940 9415 & 9420		Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - HNO3 G - Amshlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: Total Number of Containers: 3	
Sample Identification GWC-11 GWC-9 FB-1 FERR-1 GWC-20 GWC-21 DUP-1	Sample Date 9/27/16 9/27/16 9/27/16 9/27/16 9/27/16 9/27/16	Sample Time 1504 1520 1510 1530 1705 1649	Sample Type (C=comb, G=grab) G G G G G G	Matrix (W=water, S=solid, C=creosote, A=air) W W W W W W W	Date Requested (days): TAT Requested (days): PO #: WO #: Project #: SSO #: LF4
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	
Empty Kit Relinquished by: Relinquished by: Will Vigo Relinquished by: [Signature] Relinquished by: [Signature]		Date: Date: 9/28/16 0905 Date: 9/28/16 10:05 Date: [Signature]		Method of Shipment: Company: TA Company: TA Company:	
Custody Seal No.: A Yes <input type="checkbox"/> No <input type="checkbox"/>		Cooler Temperature(s): 0.0°C IR-5		Special Instructions/QC Requirements: Please also provide results to Maria Padilla and Heath McConkle	

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127820-2

SDG Number: LF #4

Login Number: 127820

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	0.0 & 0.0°C, IR-5
Cooler Temperature is recorded.	True	
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: 400-127820-2
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
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: 400-127820-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-127914-1

TestAmerica Sample Delivery Group: LF #4

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 4:25:36 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: 400-127914-1
SDG: LF #4

Job ID: 400-127914-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-127914-1

Metals

Method(s) 6020: Spike compounds were inadvertently omitted for the post-digestion spike (PDS); therefore, PDS recoveries are unavailable for preparation batch 325479 and analytical batch 325757. The associated laboratory control sample (LCS) met acceptance criteria.

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Detection Summary

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-18

Lab Sample ID: 400-127914-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.70		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00062	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0022	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Thallium	0.00012	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Barium - RA	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	43		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-127914-2

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	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.5		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	6.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	13		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-22

Lab Sample ID: 400-127914-3

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	0.21		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.6		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Calcium	19		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0036	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0017	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Barium - RA	0.074		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	51		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-23

Lab Sample ID: 400-127914-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.097	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.1		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-127914-1
 SDG: LF #4

Client Sample ID: GWC-23 (Continued)

Lab Sample ID: 400-127914-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Calcium	8.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0058		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Barium - RA	0.076		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	35		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-2

Lab Sample ID: 400-127914-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	30		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-2

Lab Sample ID: 400-127914-6

No Detections.

Client Sample ID: DUP-2

Lab Sample ID: 400-127914-7

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
Fluoride	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	7.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Barium - RA	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		2.5	1.7	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: 400-127914-1
SDG: LF #4

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: 400-127914-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127914-1	GWC-18	Water	09/28/16 10:03	09/28/16 18:00
400-127914-2	GWC-19	Water	09/28/16 09:10	09/28/16 18:00
400-127914-3	GWC-22	Water	09/28/16 09:46	09/28/16 18:00
400-127914-4	GWC-23	Water	09/28/16 13:05	09/28/16 18:00
400-127914-5	FB-2	Water	09/28/16 13:00	09/28/16 18:00
400-127914-6	FERB-2	Water	09/28/16 13:15	09/28/16 18:00
400-127914-7	DUP-2	Water	09/28/16 00:00	09/28/16 18:00

- 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: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 09/28/16 10:03

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.0	0.89	mg/L			10/08/16 22:29	1
Fluoride	0.70		0.20	0.082	mg/L			10/08/16 22:29	1
Sulfate	5.1		1.0	0.70	mg/L			10/08/16 22:29	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		10/05/16 11:13	10/06/16 18:43	5
Arsenic	0.00062	J	0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 18:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:43	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 18:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:43	5
Calcium	17		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 18:43	5
Chromium	0.0022	J	0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 18:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 11:13	10/06/16 18:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 18:43	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 18:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 18:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 18:43	5
Thallium	0.00012	J	0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 18:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.024		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:38	10/06/16 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	43		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: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-19

Date Collected: 09/28/16 09:10

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-2

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			10/08/16 22:52	1
Fluoride	0.11	J	0.20	0.082	mg/L			10/08/16 22:52	1
Sulfate	2.5		1.0	0.70	mg/L			10/08/16 22:52	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		10/05/16 11:13	10/06/16 18:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 18:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:48	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 18:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:48	5
Calcium	6.9		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 18:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 18:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 11:13	10/06/16 18:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 18:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 18:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 18:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 18:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 18:48	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.013		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:14	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		10/05/16 09:38	10/06/16 14:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	13		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: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-22
Date Collected: 09/28/16 09:46
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-3
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			10/09/16 00:23	1
Fluoride	0.21		0.20	0.082	mg/L			10/09/16 00:23	1
Sulfate	8.6		1.0	0.70	mg/L			10/09/16 00:23	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		10/05/16 11:13	10/06/16 18:52	5
Arsenic	0.0014		0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 18:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:52	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:52	5
Calcium	19		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 18:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 18:52	5
Cobalt	0.0025		0.0025	0.00040	mg/L		10/05/16 11:13	10/06/16 18:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 18:52	5
Lithium	0.0036	J	0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 18:52	5
Molybdenum	0.0017	J	0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 18:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 18:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 18:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.074		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:32	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		10/05/16 09:38	10/06/16 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	51		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: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-23

Date Collected: 09/28/16 13:05

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.0	0.89	mg/L			10/09/16 00:46	1
Fluoride	0.097	J	0.20	0.082	mg/L			10/09/16 00:46	1
Sulfate	3.1		1.0	0.70	mg/L			10/09/16 00:46	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		10/05/16 11:13	10/06/16 18:57	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 18:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:57	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 18:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 18:57	5
Calcium	8.5		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 18:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 18:57	5
Cobalt	0.0058		0.0025	0.00040	mg/L		10/05/16 11:13	10/06/16 18:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 18:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 18:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 18:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 18:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 18:57	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.076		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:37	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		10/05/16 09:38	10/06/16 15:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	35		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: 400-127914-1
SDG: LF #4

Client Sample ID: FB-2
Date Collected: 09/28/16 13:00
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-5
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			10/11/16 19:51	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 19:51	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 19:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 11:13	10/06/16 19:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 19:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 19:15	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 19:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 19:15	5
Calcium	<0.13		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 19:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 19:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 19:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 19:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 19:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 19:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 19:15	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 11:13	10/07/16 13:42	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:38	10/06/16 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		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: 400-127914-1
SDG: LF #4

Client Sample ID: FERB-2

Date Collected: 09/28/16 13:15

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/11/16 20:37	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 20:37	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 20:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 11:13	10/06/16 19:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 19:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 19:19	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 19:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 19:19	5
Calcium	<0.13		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 19:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 19:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 19:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 19:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 19:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 19:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 19:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 11:13	10/07/16 13:46	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:38	10/06/16 15:08	1

General Chemistry

Analyte	Result	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

Client Sample Results

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Client Sample ID: DUP-2

Date Collected: 09/28/16 00:00

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-7

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			10/11/16 21:00	1
Fluoride	0.13	J	0.20	0.082	mg/L			10/11/16 21:00	1
Sulfate	2.3		1.0	0.70	mg/L			10/11/16 21:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 11:13	10/06/16 19:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 19:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 19:24	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 19:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 19:24	5
Calcium	7.0		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 19:24	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 19:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 19:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 19:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 19:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 19:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 19:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.013		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 13:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 11:13	10/07/16 13:51	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		10/05/16 09:38	10/06/16 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		2.5	1.7	mg/L			10/01/16 17:33	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

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.

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: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 09/28/16 10:03

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326101	10/08/16 22:29	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 18:43	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:10	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 14:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: GWC-19

Date Collected: 09/28/16 09:10

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326101	10/08/16 22:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 18:48	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:14	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 14:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: GWC-22

Date Collected: 09/28/16 09:46

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326101	10/09/16 00:23	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 18:52	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:32	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 14:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Client Sample ID: GWC-23

Lab Sample ID: 400-127914-4

Date Collected: 09/28/16 13:05

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	326101	10/09/16 00:46	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 18:57	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:37	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: FB-2

Lab Sample ID: 400-127914-5

Date Collected: 09/28/16 13:00

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	326381	10/11/16 19:51	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 19:15	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:42	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: FERB-2

Lab Sample ID: 400-127914-6

Date Collected: 09/28/16 13:15

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	326381	10/11/16 20:37	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 19:19	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:46	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Client Sample ID: DUP-2

Date Collected: 09/28/16 00:00

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326381	10/11/16 21:00	TAJ	TAL PEN
Total Recoverable	Prep	3005A			325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	325757	10/06/16 19:24	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		325479	10/05/16 11:13	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 13:51	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 09:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	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: 400-127914-1
SDG: LF #4

HPLC/IC

Analysis Batch: 326101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total/NA	Water	300.0	
400-127914-2	GWC-19	Total/NA	Water	300.0	
400-127914-3	GWC-22	Total/NA	Water	300.0	
400-127914-4	GWC-23	Total/NA	Water	300.0	
MB 400-326101/4	Method Blank	Total/NA	Water	300.0	
LCS 400-326101/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-326101/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127231-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-127914-2 MS	GWC-19	Total/NA	Water	300.0	

Analysis Batch: 326381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-5	FB-2	Total/NA	Water	300.0	
400-127914-6	FERB-2	Total/NA	Water	300.0	
400-127914-7	DUP-2	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	
400-127914-5 MS	FB-2	Total/NA	Water	300.0	
400-128017-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 325442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total/NA	Water	7470A	
400-127914-2	GWC-19	Total/NA	Water	7470A	
400-127914-3	GWC-22	Total/NA	Water	7470A	
400-127914-4	GWC-23	Total/NA	Water	7470A	
400-127914-5	FB-2	Total/NA	Water	7470A	
400-127914-6	FERB-2	Total/NA	Water	7470A	
400-127914-7	DUP-2	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: 325479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1 - RA	GWC-18	Total Recoverable	Water	3005A	
400-127914-1	GWC-18	Total Recoverable	Water	3005A	
400-127914-2 - RA	GWC-19	Total Recoverable	Water	3005A	
400-127914-2	GWC-19	Total Recoverable	Water	3005A	
400-127914-3 - RA	GWC-22	Total Recoverable	Water	3005A	
400-127914-3	GWC-22	Total Recoverable	Water	3005A	
400-127914-4	GWC-23	Total Recoverable	Water	3005A	
400-127914-4 - RA	GWC-23	Total Recoverable	Water	3005A	
400-127914-5 - RA	FB-2	Total Recoverable	Water	3005A	
400-127914-5	FB-2	Total Recoverable	Water	3005A	
400-127914-6 - RA	FERB-2	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Metals (Continued)

Prep Batch: 325479 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-6	FERB-2	Total Recoverable	Water	3005A	
400-127914-7 - RA	DUP-2	Total Recoverable	Water	3005A	
400-127914-7	DUP-2	Total Recoverable	Water	3005A	
MB 400-325479/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-325479/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-127790-Y-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-127790-Y-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 325711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total/NA	Water	7470A	325442
400-127914-2	GWC-19	Total/NA	Water	7470A	325442
400-127914-3	GWC-22	Total/NA	Water	7470A	325442
400-127914-4	GWC-23	Total/NA	Water	7470A	325442
400-127914-5	FB-2	Total/NA	Water	7470A	325442
400-127914-6	FERB-2	Total/NA	Water	7470A	325442
400-127914-7	DUP-2	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

Analysis Batch: 325757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total Recoverable	Water	6020	325479
400-127914-2	GWC-19	Total Recoverable	Water	6020	325479
400-127914-3	GWC-22	Total Recoverable	Water	6020	325479
400-127914-4	GWC-23	Total Recoverable	Water	6020	325479
400-127914-5	FB-2	Total Recoverable	Water	6020	325479
400-127914-6	FERB-2	Total Recoverable	Water	6020	325479
400-127914-7	DUP-2	Total Recoverable	Water	6020	325479
MB 400-325479/1-A ^5	Method Blank	Total Recoverable	Water	6020	325479
LCS 400-325479/2-A	Lab Control Sample	Total Recoverable	Water	6020	325479
400-127790-Y-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	325479
400-127790-Y-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	325479

Analysis Batch: 325862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1 - RA	GWC-18	Total Recoverable	Water	6020	325479
400-127914-2 - RA	GWC-19	Total Recoverable	Water	6020	325479
400-127914-3 - RA	GWC-22	Total Recoverable	Water	6020	325479
400-127914-4 - RA	GWC-23	Total Recoverable	Water	6020	325479
400-127914-5 - RA	FB-2	Total Recoverable	Water	6020	325479
400-127914-6 - RA	FERB-2	Total Recoverable	Water	6020	325479
400-127914-7 - RA	DUP-2	Total Recoverable	Water	6020	325479
MB 400-325479/1-A ^5	Method Blank	Total Recoverable	Water	6020	325479
LCS 400-325479/2-A	Lab Control Sample	Total Recoverable	Water	6020	325479
400-127790-Y-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	325479
400-127790-Y-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	325479

QC Association Summary

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

General Chemistry

Analysis Batch: 324961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total/NA	Water	SM 2540C	
400-127914-2	GWC-19	Total/NA	Water	SM 2540C	
400-127914-3	GWC-22	Total/NA	Water	SM 2540C	
400-127914-4	GWC-23	Total/NA	Water	SM 2540C	
400-127914-5	FB-2	Total/NA	Water	SM 2540C	
400-127914-6	FERB-2	Total/NA	Water	SM 2540C	
400-127914-7	DUP-2	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	
400-127914-1 DU	GWC-18	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-326101/4
Matrix: Water
Analysis Batch: 326101

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/08/16 16:24	1
Fluoride	<0.082		0.20	0.082	mg/L			10/08/16 16:24	1
Sulfate	<0.70		1.0	0.70	mg/L			10/08/16 16:24	1

Lab Sample ID: LCS 400-326101/5
Matrix: Water
Analysis Batch: 326101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.80		mg/L		98	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 400-326101/6
Matrix: Water
Analysis Batch: 326101

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.94		mg/L		99	90 - 110	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	2	15

Lab Sample ID: 400-127231-A-4 MSD
Matrix: Water
Analysis Batch: 326101

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	260		200	453		mg/L		95	80 - 120	0	20
Fluoride	<1.6		200	211		mg/L		106	80 - 120	0	20
Sulfate	500		200	694		mg/L		99	80 - 120	1	20

Lab Sample ID: 400-127914-2 MS
Matrix: Water
Analysis Batch: 326101

Client Sample ID: GWC-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.9		10.0	16.9		mg/L		100	80 - 120
Fluoride	0.11	J	10.0	10.8		mg/L		106	80 - 120
Sulfate	2.5		10.0	13.0		mg/L		105	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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography (Continued)

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

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: 400-127914-5 MS
Matrix: Water
Analysis Batch: 326381

Client Sample ID: FB-2
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 MSD
Matrix: Water
Analysis Batch: 326381

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	24		50.0	72.8		mg/L		98	80 - 120	0	20
Fluoride	<0.41		50.0	52.6		mg/L		105	80 - 120	0	20
Sulfate	50		50.0	101		mg/L		102	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-325479/1-A ^5
Matrix: Water
Analysis Batch: 325757

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/05/16 11:13	10/06/16 17:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/05/16 11:13	10/06/16 17:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 17:13	5
Boron	<0.021		0.050	0.021	mg/L		10/05/16 11:13	10/06/16 17:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/05/16 11:13	10/06/16 17:13	5
Calcium	<0.13		0.25	0.13	mg/L		10/05/16 11:13	10/06/16 17:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/05/16 11:13	10/06/16 17:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/05/16 11:13	10/06/16 17:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/05/16 11:13	10/06/16 17:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/05/16 11:13	10/06/16 17:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/05/16 11:13	10/06/16 17:13	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

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

Lab Sample ID: MB 400-325479/1-A ^5
Matrix: Water
Analysis Batch: 325757

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.000085		0.00050	0.000085	mg/L		10/05/16 11:13	10/06/16 17:13	5

Lab Sample ID: MB 400-325479/1-A ^5
Matrix: Water
Analysis Batch: 325862

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		10/05/16 11:13	10/07/16 11:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/05/16 11:13	10/07/16 11:45	5

Lab Sample ID: LCS 400-325479/2-A
Matrix: Water
Analysis Batch: 325757

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0495		mg/L		99	80 - 120
Arsenic	0.0500	0.0500		mg/L		100	80 - 120
Beryllium	0.0500	0.0468		mg/L		94	80 - 120
Boron	0.100	0.0974		mg/L		97	80 - 120
Cadmium	0.0500	0.0491		mg/L		98	80 - 120
Calcium	5.00	4.73		mg/L		95	80 - 120
Chromium	0.0500	0.0487		mg/L		97	80 - 120
Lead	0.0500	0.0504		mg/L		101	80 - 120
Lithium	0.0500	0.0514		mg/L		103	80 - 120
Molybdenum	0.0500	0.0494		mg/L		99	80 - 120
Selenium	0.0500	0.0493		mg/L		99	80 - 120
Thallium	0.0100	0.00948		mg/L		95	80 - 120

Lab Sample ID: LCS 400-325479/2-A
Matrix: Water
Analysis Batch: 325862

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0500	0.0489		mg/L		98	80 - 120
Cobalt	0.0500	0.0477		mg/L		95	80 - 120

Lab Sample ID: 400-127790-Y-1-B MS ^5
Matrix: Water
Analysis Batch: 325757

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0505		mg/L		101	75 - 125
Arsenic	0.00055	J	0.0500	0.0518		mg/L		102	75 - 125
Beryllium	<0.00034		0.0500	0.0463		mg/L		93	75 - 125
Boron	<0.021		0.100	0.113		mg/L		113	75 - 125
Cadmium	<0.00034		0.0500	0.0508		mg/L		102	75 - 125
Calcium	3.1		5.00	7.94		mg/L		96	75 - 125
Chromium	0.0011	J	0.0500	0.0519		mg/L		104	75 - 125
Lead	0.00073	J	0.0500	0.0487		mg/L		96	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

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

Lab Sample ID: 400-127790-Y-1-B MS ^5
Matrix: Water
Analysis Batch: 325757

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Lithium	<0.0032		0.0500	0.0532		mg/L		106		75 - 125
Molybdenum	<0.00085		0.0500	0.0506		mg/L		101		75 - 125
Selenium	0.00058	J	0.0500	0.0498		mg/L		99		75 - 125
Thallium	<0.000085		0.0100	0.00962		mg/L		96		75 - 125

Lab Sample ID: 400-127790-Y-1-B MS ^5
Matrix: Water
Analysis Batch: 325862

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Barium	0.017		0.0500	0.0664		mg/L		99		75 - 125
Cobalt	<0.00040		0.0500	0.0508		mg/L		102		75 - 125

Lab Sample ID: 400-127790-Y-1-C MSD ^5
Matrix: Water
Analysis Batch: 325757

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0482		mg/L		96		75 - 125	5	20
Arsenic	0.00055	J	0.0500	0.0508		mg/L		101		75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0456		mg/L		91		75 - 125	1	20
Boron	<0.021		0.100	0.110		mg/L		110		75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0493		mg/L		99		75 - 125	3	20
Calcium	3.1		5.00	7.81		mg/L		93		75 - 125	2	20
Chromium	0.0011	J	0.0500	0.0505		mg/L		101		75 - 125	3	20
Lead	0.00073	J	0.0500	0.0478		mg/L		94		75 - 125	2	20
Lithium	<0.0032		0.0500	0.0531		mg/L		106		75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0490		mg/L		98		75 - 125	3	20
Selenium	0.00058	J	0.0500	0.0479		mg/L		95		75 - 125	4	20
Thallium	<0.000085		0.0100	0.00953		mg/L		95		75 - 125	1	20

Lab Sample ID: 400-127790-Y-1-C MSD ^5
Matrix: Water
Analysis Batch: 325862

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 325479

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Barium	0.017		0.0500	0.0665		mg/L		99		75 - 125	0	20
Cobalt	<0.00040		0.0500	0.0482		mg/L		96		75 - 125	5	20

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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:04	10/06/16 14:31	1

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QC Sample Results

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

TestAmerica Job ID: 400-127914-1
SDG: LF #4

Method: 7470A - Mercury (CVAA) (Continued)

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	%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	%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	%Rec. Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00191		mg/L		95	80 - 120	5	20

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: 400-127914-1 DU
Matrix: Water
Analysis Batch: 324961

Client Sample ID: GWC-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	43		43.0		mg/L		0	5

TestAmerica Pensacola
 3855 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

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Chain of Custody Record

Lab P/N: _____
 Client Information: ERM - T. Payne, M. Rogers, T. Wandell
 Client Contact: John Abraham
 Phone: 878-486-2700
 Email: cheyenne.whitmore@testamerica.com

Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-506-7239
 Email: JAbraham@southern.com
 Project Name: CCR - Plant McIntosh
 Site: LF4

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Granular, Slurried, Osmometric, Spot/Trace, Ash)	Analysis Requested		Special Instructions/Note
					Metals Appendix III & IV - EPA 8220 & EPA 7470 Radium 226 & 228 - GM 499 9375 & 9320	IDS - SM 2540C : CFF 504 - EPA 500	
6WC-18	9/28/16	1003	G	W			6WC-18 + 6WC-23
6WC-19	9/28/16	0910	G	W			Extra Pad
6WC-22	9/28/16	0946	G	W			Bottle filled for
6WC-23	9/28/16	1305	G	W			Lab QA/QC
FB-2	9/28/16	1300	G	W			
FERB-2	9/28/16	1315	G	W			
DUP-2	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 Relinquished by: _____ Date: _____

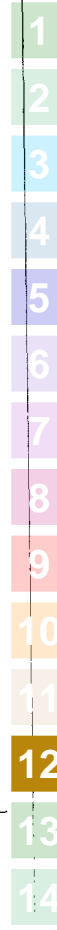
Relinquished by: Will Vige
 Relinquished by: _____ Date: 9/28/16 1800
 Relinquished by: _____ Date: _____

Relinquished by: _____ Date: _____

Company: ERM
 Received By: _____
 Received By: _____
 Received By: _____

Method of Shipment: _____
 Date/Time: 9/28/16 1805
 Date/Time: 9/30/16 054
 Date/Time: _____

Cooler Temperature(s): 0°C, 1°C, 18°C



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127914-1

SDG Number: LF #4

Login Number: 127914

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	2.2°C, 4.1°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: 400-127914-1
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
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: 400-127914-2

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

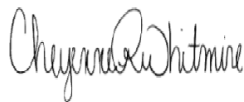
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

11/14/2016 9:48:18 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: 400-127914-2
SDG: LF #4

Job ID: 400-127914-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127914-2

RAD

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: GWC-18 (400-127914-1), GWC-18 (400-127914-1[DUJ]), GWC-19 (400-127914-2), GWC-22 (400-127914-3), GWC-23 (400-127914-4), GWC-23 (400-127914-4[DUJ]), FB-2 (400-127914-5), FERB-2 (400-127914-6) and DUP-2 (400-127914-7).

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: GWC-18 (400-127914-1), GWC-18 (400-127914-1[DUJ]), GWC-19 (400-127914-2), GWC-22 (400-127914-3), GWC-23 (400-127914-4), GWC-23 (400-127914-4[DUJ]), FB-2 (400-127914-5), FERB-2 (400-127914-6) and DUP-2 (400-127914-7).



Method Summary

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127914-1	GWC-18	Water	09/28/16 10:03	09/28/16 18:00
400-127914-2	GWC-19	Water	09/28/16 09:10	09/28/16 18:00
400-127914-3	GWC-22	Water	09/28/16 09:46	09/28/16 18:00
400-127914-4	GWC-23	Water	09/28/16 13:05	09/28/16 18:00
400-127914-5	FB-2	Water	09/28/16 13:00	09/28/16 18:00
400-127914-6	FERB-2	Water	09/28/16 13:15	09/28/16 18:00
400-127914-7	DUP-2	Water	09/28/16 00:00	09/28/16 18:00

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- 2
- 3
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- 5
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- 9
- 10
- 11
- 12
- 13

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: GWC-18

Lab Sample ID: 400-127914-1

Date Collected: 09/28/16 10:03

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	0.175	U	0.189	0.189	1.00	0.305	pCi/L	10/14/16 16:44	11/09/16 07:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					10/14/16 16:44	11/09/16 07:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.208	U	0.383	0.383	1.00	0.716	pCi/L	10/14/16 17:37	11/08/16 19:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					10/14/16 17:37	11/08/16 19:54	1
Y Carrier	71.0		40 - 110					10/14/16 17:37	11/08/16 19:54	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0326	U	0.427	0.428	5.00	0.716	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-127914-2

Date Collected: 09/28/16 09:10

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	0.198	U	0.185	0.186	1.00	0.289	pCi/L	10/14/16 16:44	11/09/16 07:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					10/14/16 16:44	11/09/16 07:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.185	U	0.350	0.351	1.00	0.661	pCi/L	10/14/16 17:37	11/08/16 19:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					10/14/16 17:37	11/08/16 19:54	1
Y Carrier	74.8		40 - 110					10/14/16 17:37	11/08/16 19:54	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0127	U	0.396	0.397	5.00	0.661	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: GWC-22

Lab Sample ID: 400-127914-3

Date Collected: 09/28/16 09:46

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	0.280	U	0.196	0.198	1.00	0.286	pCi/L	10/14/16 16:44	11/09/16 07:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					10/14/16 16:44	11/09/16 07:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.154	U	0.348	0.348	1.00	0.597	pCi/L	10/14/16 17:37	11/08/16 20:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					10/14/16 17:37	11/08/16 20:00	1
Y Carrier	77.8		40 - 110					10/14/16 17:37	11/08/16 20:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.434	U	0.400	0.401	5.00	0.597	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: GWC-23

Lab Sample ID: 400-127914-4

Date Collected: 09/28/16 13:05

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	-0.0491	U	0.205	0.205	1.00	0.398	pCi/L	10/14/16 16:44	11/09/16 07:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					10/14/16 16:44	11/09/16 07:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.288	U	0.311	0.312	1.00	0.617	pCi/L	10/14/16 17:37	11/08/16 20:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					10/14/16 17:37	11/08/16 20:00	1
Y Carrier	79.3		40 - 110					10/14/16 17:37	11/08/16 20:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.338	U	0.373	0.373	5.00	0.617	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: FB-2
Date Collected: 09/28/16 13:00
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-5
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	0.000	U	0.192	0.192	1.00	0.368	pCi/L	10/14/16 16:44	11/09/16 07:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					10/14/16 16:44	11/09/16 07:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0150	U	0.341	0.341	1.00	0.619	pCi/L	10/14/16 17:37	11/08/16 20:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					10/14/16 17:37	11/08/16 20:00	1
Y Carrier	78.9		40 - 110					10/14/16 17:37	11/08/16 20:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0150	U	0.391	0.391	5.00	0.619	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: FERB-2

Lab Sample ID: 400-127914-6

Date Collected: 09/28/16 13:15

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	0.216	U	0.204	0.205	1.00	0.324	pCi/L	10/14/16 16:44	11/09/16 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		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	-0.131	U	0.346	0.346	1.00	0.640	pCi/L	10/14/16 17:37	11/08/16 20:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/14/16 17:37	11/08/16 20:01	1
Y Carrier	77.0		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	0.0846	U	0.402	0.402	5.00	0.640	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

Client Sample ID: DUP-2

Lab Sample ID: 400-127914-7

Date Collected: 09/28/16 00:00

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	0.243	U	0.236	0.237	1.00	0.377	pCi/L	10/14/16 16:44	11/09/16 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		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	0.326	U	0.358	0.359	1.00	0.586	pCi/L	10/14/16 17:37	11/08/16 20:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					10/14/16 17:37	11/08/16 20:01	1
Y Carrier	77.4		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	0.569	U	0.429	0.430	5.00	0.586	pCi/L		11/11/16 15:16	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 09/28/16 10:03

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-1

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	278453	11/09/16 07:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278266	11/08/16 19:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: GWC-19

Date Collected: 09/28/16 09:10

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-2

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	278453	11/09/16 07:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278266	11/08/16 19:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: GWC-22

Date Collected: 09/28/16 09:46

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-3

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	278453	11/09/16 07:02	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 20:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: GWC-23

Date Collected: 09/28/16 13:05

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127914-4

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	278453	11/09/16 07:02	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 20:00	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: 400-127914-2
SDG: LF #4

Client Sample ID: FB-2

Lab Sample ID: 400-127914-5

Date Collected: 09/28/16 13:00

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	278453	11/09/16 07:03	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 20:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: FERB-2

Lab Sample ID: 400-127914-6

Date Collected: 09/28/16 13:15

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 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: DUP-2

Lab Sample ID: 400-127914-7

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 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

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: 400-127914-2
SDG: LF #4

Rad

Prep Batch: 274647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total/NA	Water	PrecSep-21	
400-127914-2	GWC-19	Total/NA	Water	PrecSep-21	
400-127914-3	GWC-22	Total/NA	Water	PrecSep-21	
400-127914-4	GWC-23	Total/NA	Water	PrecSep-21	
400-127914-5	FB-2	Total/NA	Water	PrecSep-21	
400-127914-6	FERB-2	Total/NA	Water	PrecSep-21	
400-127914-7	DUP-2	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	
400-127914-1 DU	GWC-18	Total/NA	Water	PrecSep-21	
400-127914-4 DU	GWC-23	Total/NA	Water	PrecSep-21	

Prep Batch: 274655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127914-1	GWC-18	Total/NA	Water	PrecSep_0	
400-127914-2	GWC-19	Total/NA	Water	PrecSep_0	
400-127914-3	GWC-22	Total/NA	Water	PrecSep_0	
400-127914-4	GWC-23	Total/NA	Water	PrecSep_0	
400-127914-5	FB-2	Total/NA	Water	PrecSep_0	
400-127914-6	FERB-2	Total/NA	Water	PrecSep_0	
400-127914-7	DUP-2	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	
400-127914-1 DU	GWC-18	Total/NA	Water	PrecSep_0	
400-127914-4 DU	GWC-23	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

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

Lab Sample ID: 400-127914-1 DU
Matrix: Water
Analysis Batch: 278453

Client Sample ID: GWC-18
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	0.175	U	0.1668	U	0.193	1.00	0.316	pCi/L	0.02	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	86.9		40 - 110							

Lab Sample ID: 400-127914-4 DU
Matrix: Water
Analysis Batch: 278453

Client Sample ID: GWC-23
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	-0.0491	U	0.1216	U	0.215	1.00	0.372	pCi/L	0.41	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	80.3		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

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 MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
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	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
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			

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	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-228	19.1	24.83		2.74	1.00	0.779	pCi/L	130	56 - 140
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier							
Ba Carrier	80.6		40 - 110						
Y Carrier	66.5		40 - 110						

Lab Sample ID: 400-127914-1 DU
Matrix: Water
Analysis Batch: 278266

Client Sample ID: GWC-18
Prep Type: Total/NA
Prep Batch: 274655

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	-0.208	U	0.4070	U	0.404	1.00	0.653	pCi/L	0.78	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	86.9		40 - 110							
Y Carrier	77.0		40 - 110							

Lab Sample ID: 400-127914-4 DU
Matrix: Water
Analysis Batch: 278291

Client Sample ID: GWC-23
Prep Type: Total/NA
Prep Batch: 274655

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	-0.288	U	0.2830	U	0.364	1.00	0.603	pCi/L	0.84	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	80.3		40 - 110							
Y Carrier	78.5		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-127914-2
 SDG: LF #4

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

Lab Sample ID: 400-127914-1 DU
Matrix: Water
Analysis Batch: 278925

Client Sample ID: GWC-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	-0.0326	U	0.5739	U	0.448	5.00	0.653	pCi/L	0.69	

Lab Sample ID: 400-127914-4 DU
Matrix: Water
Analysis Batch: 278925

Client Sample ID: GWC-23
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	-0.338	U	0.4046	U	0.423	5.00	0.603	pCi/L	0.93	

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TestAmerica Pensacola
 3855 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671



Chain of Custody Record

Client Information
 Client Contact: John Abraham
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-506-7239
 Email: JAbraham@southern.com
 Project Name: CCR - Plant Meltdown
 Site: LF4

Lab POC
 Lab POC: Whitmore, Cheryenne R.
 Email: cheryenne.whitmore@testamerica.com

Carrier Tracking No.: 1091
Page: 400-127914

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Granular, Slurried, Osmotically Reduced, Aqueous)	Analysis Requested		Special Instructions/Note:
					Metals Appendix III & IV - EPA 8220 & EPA 7470 Radium 226 & 228 - BW-449 9375 & 9320	IDS - SM 2540C: ClF, SO4 - EPA 500	
6WC-18	9/28/16	1003	G	W			6WC-18 + 6WC-23
6WC-19	9/28/16	0910	G	W			Extra Pad
6WC-22	9/28/16	0946	G	W			Bottle filled for
6WC-23	9/28/16	1305	G	W			Lab QA/QC
FB-2	9/28/16	1300	G	W			
FERB-2	9/28/16	1315	G	W			
DUP-2	9/28/16	—	G	W			
				W			
				W			
				W			
				W			

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (Specify)

Empty Kit Relinquished by: [Signature]
 Relinquished by: Will Vige
 Relinquished by: [Signature]
 Relinquished by: [Signature]

Date: 9/28/16 1800
 Date/Time: 9/28/16 1800
 Date/Time: 9/30/16 054
 Date/Time: 9/30/16 1800

Company: ERM
 Company: [Signature]
 Company: [Signature]
 Company: [Signature]

Method of Shipment: 00C LIC 1P-5
 Cooler Temperature: 3C and Other Remarks:



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127914-2

SDG Number: LF #4

Login Number: 127914

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	2.2°C, 4.1°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: 400-127914-2
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16 *
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

Certification Summary

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

TestAmerica Job ID: 400-127914-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-130095-1

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

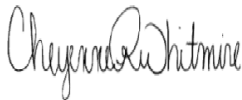
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/1/2016 10:02:06 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: 400-130095-1
SDG: LF #4

Job ID: 400-130095-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-130095-1

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 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.

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Detection Summary

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

TestAmerica Job ID: 400-130095-1
 SDG: LF #4

Client Sample ID: GWA-3

Lab Sample ID: 400-130095-1

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
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.75		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4A

Lab Sample ID: 400-130095-2

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
Sulfate	7.4		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	0.034		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	48		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: 400-130095-1
SDG: LF #4

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: 400-130095-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130095-1	GWA-3	Water	11/14/16 17:20	11/15/16 11:16
400-130095-2	GWA-4A	Water	11/14/16 17:08	11/15/16 11:16

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Client Sample Results

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

TestAmerica Job ID: 400-130095-1
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 11/14/16 17:20
Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-1
Matrix: Water

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			11/19/16 18:52	1
Fluoride	<0.082		0.20	0.082	mg/L			11/19/16 18:52	1
Sulfate	<0.70		1.0	0.70	mg/L			11/19/16 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		11/21/16 09:23	11/21/16 16:29	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 16:29	5
Barium	0.014		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 16:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 16:29	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 16:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 16:29	5
Calcium	0.75		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 16:29	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 16:29	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 16:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 16:29	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 16:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 16:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 16:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 16:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/18/16 09:57	11/23/16 15:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			11/17/16 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

Client Sample ID: GWA-4A

Date Collected: 11/14/16 17:08

Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-2

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			11/19/16 19:38	1
Fluoride	<0.082		0.20	0.082	mg/L			11/19/16 19:38	1
Sulfate	7.4		1.0	0.70	mg/L			11/19/16 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 09:23	11/21/16 16:34	5
Arsenic	0.0017	B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 16:34	5
Barium	0.034		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 16:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 16:34	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 16:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 16:34	5
Calcium	3.1		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 16:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 16:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 16:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 16:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 16:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 16:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 16:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 16:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/18/16 09:57	11/23/16 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			11/17/16 17:11	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

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
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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: 400-130095-1
SDG: LF #4

Client Sample ID: GWA-3

Date Collected: 11/14/16 17:20

Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	331834	11/19/16 18:52	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 16:29	AJR	TAL PEN
Total/NA	Prep	7470A			331662	11/18/16 09:57	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332404	11/23/16 15:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331538	11/17/16 17:11	TET	TAL PEN

Client Sample ID: GWA-4A

Date Collected: 11/14/16 17:08

Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	331834	11/19/16 19:38	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 16:34	AJR	TAL PEN
Total/NA	Prep	7470A			331662	11/18/16 09:57	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332404	11/23/16 15:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331538	11/17/16 17:11	TET	TAL PEN

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

HPLC/IC

Analysis Batch: 331834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total/NA	Water	300.0	
400-130095-2	GWA-4A	Total/NA	Water	300.0	
MB 400-331834/35	Method Blank	Total/NA	Water	300.0	
LCS 400-331834/36	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-331834/37	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130027-I-3 MS	Matrix Spike	Total/NA	Water	300.0	
400-130027-I-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 331662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total/NA	Water	7470A	
400-130095-2	GWA-4A	Total/NA	Water	7470A	
MB 400-331662/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-331662/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130166-E-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-130166-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 331915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total Recoverable	Water	3005A	
400-130095-2	GWA-4A	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
400-130095-1	GWA-3	Total Recoverable	Water	6020	331915
400-130095-2	GWA-4A	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

Analysis Batch: 332404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total/NA	Water	7470A	331662
400-130095-2	GWA-4A	Total/NA	Water	7470A	331662
MB 400-331662/14-A	Method Blank	Total/NA	Water	7470A	331662
LCS 400-331662/15-A	Lab Control Sample	Total/NA	Water	7470A	331662
400-130166-E-1-B MS	Matrix Spike	Total/NA	Water	7470A	331662
400-130166-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	331662

QC Association Summary

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

General Chemistry

Analysis Batch: 331538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total/NA	Water	SM 2540C	
400-130095-2	GWA-4A	Total/NA	Water	SM 2540C	
MB 400-331538/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331538/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130091-C-2 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-331834/35
Matrix: Water
Analysis Batch: 331834

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			11/19/16 12:24	1
Fluoride	<0.082		0.20	0.082	mg/L			11/19/16 12:24	1
Sulfate	<0.70		1.0	0.70	mg/L			11/19/16 12:24	1

Lab Sample ID: LCS 400-331834/36
Matrix: Water
Analysis Batch: 331834

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.96		mg/L		100	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	9.08		mg/L		91	90 - 110

Lab Sample ID: LCSD 400-331834/37
Matrix: Water
Analysis Batch: 331834

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	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	9.22		mg/L		92	90 - 110	1	15

Lab Sample ID: 400-130027-I-3 MS
Matrix: Water
Analysis Batch: 331834

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	<45		500	531		mg/L		106	80 - 120
Fluoride	<4.1		500	537		mg/L		107	80 - 120
Sulfate	2300		500	2690	E 4	mg/L		85	80 - 120

Lab Sample ID: 400-130027-I-3 MSD
Matrix: Water
Analysis Batch: 331834

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	<45		500	532		mg/L		106	80 - 120	0	20
Fluoride	<4.1		500	530		mg/L		106	80 - 120	1	20
Sulfate	2300		500	2710	E 4	mg/L		89	80 - 120	1	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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

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

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
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

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	%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	%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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130095-1
SDG: LF #4

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

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	%Rec. Limits
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	%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
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 400-331662/14-A
Matrix: Water
Analysis Batch: 332404

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 331662

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/18/16 09:34	11/23/16 14:15	1

Lab Sample ID: LCS 400-331662/15-A
Matrix: Water
Analysis Batch: 332404

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 331662

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000934		mg/L		93	80 - 120

Lab Sample ID: 400-130166-E-1-B MS
Matrix: Water
Analysis Batch: 332404

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 331662

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00203		mg/L		101	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-130095-1
 SDG: LF #4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-130166-E-1-C MSD
Matrix: Water
Analysis Batch: 332404

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 331662

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00206		mg/L		102	80 - 120	1	20

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

Lab Sample ID: MB 400-331538/1
Matrix: Water
Analysis Batch: 331538

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/17/16 17:11	1

Lab Sample ID: LCS 400-331538/2
Matrix: Water
Analysis Batch: 331538

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

Lab Sample ID: 400-130091-C-2 DU
Matrix: Water
Analysis Batch: 331538

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	66		66.0		mg/L		0	5

TestAmerica Pensacola
 3955 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Chain of Custody Record

TestAmerica

Sampler: 77 Lab Pk: 74
 ERM: T. Payne, M. Thomas, C. Jurdle, Tracy Whitmire, Cheyenne R. Wardell
 Phone: 770 E-Mail: cheyenne.whitmire@testamericainc.com
 878-486-0700

Client Information

Client Contact:
 Julie A. Latham

Company: Southern Company

Address: 241 Ralph McGill Blvd SE B1-1185

City: Atlanta

State, Zip: GA, 30308

Phone: 404-596-7774

Email:

Accountant: 554 - 611 (CALLER)

Account Name:

CCR - Plant/Mintosh

LF4

Carrier Tracking No(s):

COOC No:

Page: 1 of 1

Job #:

Analysis Requested

- Preservation Codes:
- A - HCL
 - B - NaOH
 - C - Zn Acetate
 - D - Nitric Acid
 - E - H2SO4
 - F - HNO3
 - G - Vanolur
 - H - Phosphoric Acid
 - I - None
 - J - H2O2
 - K - H2O2
 - L - E.P.
 - M - None
 - N - None
 - O - AsHCl3
 - P - H2SO4
 - Q - H2SO4
 - R - H2SO4
 - S - H2SO4
 - T - Phosphoric Acid
 - U - Phosphate
 - V - H2O2
 - W - H2O2
 - X - H2O2
 - Y - H2O2
 - Z - H2O2

Metal: Appendix B & V - EPA 620 - EPA 300
 TDS - Sulfate: ClF504 - EPA 300
 Metals Appendix B & V - EPA 620 - EPA 300
 Pesticides 226 & 228 - EPA 716 - EPA 9315 - 9320

Date	Time	Company	Received By	Signature
11/14/16	17:30	ES&S	John Stump	[Signature]
11/14/16	17:08	ES&S	John Stump	[Signature]



400-130095 Chain of Custody

Empty Kit Relinquished by:

Relinquished by: W. V. [Signature]

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seal Intact: Yes

Custody Seal No.:

Date:

11/15/16

10:30

11:16

Company:

ES&S

Company:

ES&S

Company:

ES&S

Date/Time:

11-15-16

10:30

11:16

Company:

ES&S

Company:

ES&S

Company:

ES&S



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130095-1

SDG Number: LF #4

Login Number: 130095

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	0.4°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: 400-130095-1
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

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: 400-130095-2

TestAmerica Sample Delivery Group: LF #4

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:

12/29/2016 8:16:16 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-130095-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-130095-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130095-1	GWA-3	Water	11/14/16 17:20	11/15/16 11:16
400-130095-2	GWA-4A	Water	11/14/16 17:08	11/15/16 11:16

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Client Sample Results

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

TestAmerica Job ID: 400-130095-2
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 11/14/16 17:20
Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-1
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	0.416		0.257	0.259	1.00	0.340	pCi/L	11/22/16 07:37	12/22/16 23:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					11/22/16 07:37	12/22/16 23:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0583	U	0.276	0.276	1.00	0.477	pCi/L	11/22/16 08:18	12/22/16 13:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					11/22/16 08:18	12/22/16 13:51	1
Y Carrier	94.2		40 - 110					11/22/16 08:18	12/22/16 13:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.474	U	0.377	0.379	5.00	0.477	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130095-2
 SDG: LF #4

Client Sample ID: GWA-4A

Lab Sample ID: 400-130095-2

Date Collected: 11/14/16 17:08

Matrix: Water

Date Received: 11/15/16 11:16

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.358		0.247	0.249	1.00	0.341	pCi/L	11/22/16 07:37	12/22/16 23:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					11/22/16 07:37	12/22/16 23:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.279	U	0.258	0.259	1.00	0.416	pCi/L	11/22/16 08:18	12/22/16 13:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					11/22/16 08:18	12/22/16 13:51	1
Y Carrier	87.5		40 - 110					11/22/16 08:18	12/22/16 13:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.636		0.357	0.359	5.00	0.416	pCi/L		12/28/16 09:53	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130095-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-130095-2
 SDG: LF #4

Client Sample ID: GWA-3

Date Collected: 11/14/16 17:20

Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280400	11/22/16 07:37	AS	TAL SL
Total/NA	Analysis	9315		1	285090	12/22/16 23:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280445	11/22/16 08:18	AS	TAL SL
Total/NA	Analysis	9320		1	285117	12/22/16 13:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWA-4A

Date Collected: 11/14/16 17:08

Date Received: 11/15/16 11:16

Lab Sample ID: 400-130095-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280400	11/22/16 07:37	AS	TAL SL
Total/NA	Analysis	9315		1	285090	12/22/16 23:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280445	11/22/16 08:18	AS	TAL SL
Total/NA	Analysis	9320		1	285117	12/22/16 13:51	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	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: 400-130095-2
SDG: LF #4

Rad

Prep Batch: 280400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total/NA	Water	PrecSep-21	
400-130095-2	GWA-4A	Total/NA	Water	PrecSep-21	
MB 160-280400/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-280400/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
480-109617-A-16-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
480-109617-A-16-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 280445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130095-1	GWA-3	Total/NA	Water	PrecSep_0	
400-130095-2	GWA-4A	Total/NA	Water	PrecSep_0	
MB 160-280445/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-280445/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
480-109617-A-16-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
480-109617-A-16-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-130095-2
SDG: LF #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-280400/1-A
Matrix: Water
Analysis Batch: 285117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280400

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.03116	U	0.169	0.169	1.00	0.380	pCi/L	11/22/16 07:37	12/22/16 22:54	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110					11/22/16 07:37	12/22/16 22:54	1

Lab Sample ID: LCS 160-280400/2-A
Matrix: Water
Analysis Batch: 285334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280400

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	13.26		1.59	1.00	0.306	pCi/L	120	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	84.6		40 - 110						

Lab Sample ID: 480-109617-A-16-A MS
Matrix: Water
Analysis Batch: 285089

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 280400

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	1.90		11.1	15.25		1.84	1.00	0.322	pCi/L	120	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	91.5		40 - 110								

Lab Sample ID: 480-109617-A-16-B MSD
Matrix: Water
Analysis Batch: 285089

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 280400

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	1.90		11.1	15.26		1.88	1.00	0.382	pCi/L	120	75 - 138	0	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	82.3		40 - 110										

QC Sample Results

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

TestAmerica Job ID: 400-130095-2
SDG: LF #4

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-280445/1-A
Matrix: Water
Analysis Batch: 285090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280445

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3788	U	0.302	0.304	1.00	0.479	pCi/L	11/22/16 08:18	12/22/16 13:52	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110	11/22/16 08:18	12/22/16 13:52	1
Y Carrier	85.6		40 - 110	11/22/16 08:18	12/22/16 13:52	1

Lab Sample ID: LCS 160-280445/2-A
Matrix: Water
Analysis Batch: 285090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280445

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	15.25		1.65	1.00	0.467	pCi/L	108	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	84.6		40 - 110
Y Carrier	88.6		40 - 110

Lab Sample ID: 480-109617-A-16-C MS
Matrix: Water
Analysis Batch: 285090

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 280445

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	2.16		14.1	16.31		1.73	1.00	0.404	pCi/L	100	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	91.5		40 - 110
Y Carrier	89.3		40 - 110

Lab Sample ID: 480-109617-A-16-D MSD
Matrix: Water
Analysis Batch: 285090

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 280445

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	2.16		14.1	14.36		1.58	1.00	0.366	pCi/L	86	45 - 150	0.59	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	82.3		40 - 110
Y Carrier	92.0		40 - 110

QC Sample Results

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

TestAmerica Job ID: 400-130095-2
 SDG: LF #4

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

Lab Sample ID: 400-130146-A-4 DU
Matrix: Water
Analysis Batch: 285684

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	0.395	U	0.2988	U	0.358	5.00	0.540	pCi/L	0.13	

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Chain of Custody Record

TestAmerica Pensacola
 3955 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Client Information

Client Contact:
 Julie A. Latham
 Company
 Southern Company
 Address:
 241 Ralph McGill Blvd SE B1-1185
 City
 Atlanta
 State, Zip
 GA, 30308
 Phone
 404-596-7774
 Email:
 julie.latham@southern.com
 Job Dept Name
CCR - Plant/Maint

Carrier Tracking Info:
 Lab Pk:
 Whitmire, Cheyenne R.
 E-Mail:
 cheyenne.whitmire@testamericainc.com
 Page: 1 of 1
 Job #: _____

Analysis Requested

Preservation Codes:
 A - None
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - Hydrochloric Acid
 F - HNO₃
 G - Hydrochloric Acid
 H - Perchloric Acid
 I - None
 J - H₂O
 K - H₂O
 L - E.P.
 M - Other (specify)

Date	Time	Company	Received By
11/14/16	17:30	ES&S	[Signature]
11/14/16	17:08	ASAV	[Signature]

Date	Time	Company	Received By
11/15/16	10:30	ASAV	[Signature]
11/15/16	11:16	ASAV	[Signature]

Empty Kit Relinquished by: [Signature]
 Relinquished by: W.L. Vito
 Relinquished by: [Signature]
 Relinquished by: [Signature]
 Relinquished by: [Signature]
 Relinquished by: [Signature]

Custody Seal No. 1116
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 Custody Seal No. 1116

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130095-2

SDG Number: LF #4

Login Number: 130095

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	0.4°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: 400-130095-2
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-130095-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

* Certification renewal pending - certification considered valid.

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: 400-130146-1

TestAmerica Sample Delivery Group: LF #4

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:

12/1/2016 10:19:59 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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Case Narrative

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Job ID: 400-130146-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-130146-1

Metals

Method(s) 6020: The method blank for preparation batch 331937 and analytical batch 332176 contained Selenium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 6020: The internal standard failed biased low (marginally) for the following: (CCB 400-332176/79) and (CCV 400-332176/76). The recovery of associated analytes were within method recovery criteria and associated samples passed all internal standard recovery criteria.

Method(s) 7470A: The method blank for prep batch 332004 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: 400-130146-1
SDG: LF #4

Client Sample ID: GWA-2

Lab Sample ID: 400-130146-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.2		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.033		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.54		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-130146-2

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
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-130146-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.28		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000097	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-14

Lab Sample ID: 400-130146-4

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
Sulfate	1.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.50		0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-15

Lab Sample ID: 400-130146-5

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
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWA-15 (Continued)

Lab Sample ID: 400-130146-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.35		0.25	0.13	mg/L	5		6020	Total
Cobalt	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000093	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-16

Lab Sample ID: 400-130146-6

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
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.39		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00050	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000072	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-17

Lab Sample ID: 400-130146-7

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	0.16	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00047	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00056	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0020	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00071	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-130146-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.97	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0019	J	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: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-1 (Continued)

Lab Sample ID: 400-130146-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0015	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000084	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-12

Lab Sample ID: 400-130146-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.0096		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.61		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00014	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-10

Lab Sample ID: 400-130146-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.7		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	3.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		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	13		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0062		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0051		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.00010	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	94		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-130146-11

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
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.27		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00053	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-130146-12

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-11 (Continued)

Lab Sample ID: 400-130146-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.43		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	0.0010	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0050		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0052		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000093	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-130146-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.8		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.000078	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-20

Lab Sample ID: 400-130146-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.5		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
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0019	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000073	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	82		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-21

Lab Sample ID: 400-130146-15

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
Sulfate	1.0		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0017	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWC-21 (Continued)

Lab Sample ID: 400-130146-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00018	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-130146-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-130146-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-130146-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3		1.0	0.89	mg/L	1		300.0	Total/NA
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
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00052	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00039	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0019	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00068	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-130146-19

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	0.86	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.24	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00053	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

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: 400-130146-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130146-1	GWA-2	Water	11/15/16 09:30	11/16/16 10:05
400-130146-2	GWA-5	Water	11/15/16 09:00	11/16/16 10:05
400-130146-3	GWA-13	Water	11/15/16 09:15	11/16/16 10:05
400-130146-4	GWA-14	Water	11/15/16 10:25	11/16/16 10:05
400-130146-5	GWA-15	Water	11/15/16 10:50	11/16/16 10:05
400-130146-6	GWC-16	Water	11/15/16 10:55	11/16/16 10:05
400-130146-7	GWC-17	Water	11/15/16 12:10	11/16/16 10:05
400-130146-8	GWC-1	Water	11/15/16 12:45	11/16/16 10:05
400-130146-9	GWC-12	Water	11/15/16 12:15	11/16/16 10:05
400-130146-10	GWC-10	Water	11/15/16 14:40	11/16/16 10:05
400-130146-11	GWC-9	Water	11/15/16 14:40	11/16/16 10:05
400-130146-12	GWC-11	Water	11/15/16 16:08	11/16/16 10:05
400-130146-13	GWC-19	Water	11/15/16 16:45	11/16/16 10:05
400-130146-14	GWC-20	Water	11/15/16 16:45	11/16/16 10:05
400-130146-15	GWC-21	Water	11/15/16 15:30	11/16/16 10:05
400-130146-16	FB-1	Water	11/15/16 16:10	11/16/16 10:05
400-130146-17	FERB-1	Water	11/15/16 16:20	11/16/16 10:05
400-130146-18	DUP-1	Water	11/15/16 00:00	11/16/16 10:05
400-130146-19	DUP-2	Water	11/15/16 00:00	11/16/16 10:05

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 11/15/16 09:30
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.2		1.0	0.89	mg/L			11/23/16 00:22	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 00:22	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 00:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 18:20	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 18:20	5
Barium	0.033		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 18:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 18:20	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 18:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 18:20	5
Calcium	0.54		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 18:20	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 18:20	5
Cobalt	0.0013	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 18:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 18:20	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 18:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 18:20	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 18:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 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		11/21/16 16:15	11/29/16 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWA-5
Date Collected: 11/15/16 09:00
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-2
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			11/23/16 01:33	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 01:33	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 01:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 18:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 18:24	5
Barium	0.039		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 18:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 18:24	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 18:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 18:24	5
Calcium	2.5		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 18:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 18:24	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 18:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 18:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 18:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 18:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 18:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 18:24	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		11/21/16 16:15	11/29/16 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWA-13

Date Collected: 11/15/16 09:15

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.8		1.0	0.89	mg/L			11/23/16 01:58	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 01:58	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 01:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:09	5
Barium	0.015		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:09	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:09	5
Calcium	0.28		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:09	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:09	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000097	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWA-14

Date Collected: 11/15/16 10:25

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-4

Matrix: Water

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			11/23/16 02:21	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 02:21	1
Sulfate	1.5		1.0	0.70	mg/L			11/23/16 02:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:14	5
Barium	0.012		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:14	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:14	5
Calcium	0.50		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:14	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWA-15
Date Collected: 11/15/16 10:50
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-5
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			11/23/16 02:44	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 02:44	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 02:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:18	5
Barium	0.023		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:18	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:18	5
Calcium	0.35		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:18	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:18	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000093	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-16

Date Collected: 11/15/16 10:55

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-6

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			11/23/16 03:52	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 03:52	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 03:52	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 13:20	11/22/16 19:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:23	5
Barium	0.023		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:23	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:23	5
Calcium	0.39		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:23	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:23	5
Cobalt	0.00050	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:23	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:23	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000072	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWC-17

Date Collected: 11/15/16 12:10

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-7

Matrix: Water

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			11/23/16 04:15	1
Fluoride	0.16	J	0.20	0.082	mg/L			11/23/16 04:15	1
Sulfate	1.3		1.0	0.70	mg/L			11/23/16 04:15	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 13:20	11/22/16 19:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:27	5
Barium	0.017		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:27	5
Beryllium	0.00047	J	0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:27	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:27	5
Cadmium	0.00056	J	0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:27	5
Calcium	2.1		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:27	5
Chromium	0.0020	J	0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:27	5
Cobalt	0.00071	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-1
Date Collected: 11/15/16 12:45
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-8
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.6		1.0	0.89	mg/L			11/23/16 04:38	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 04:38	1
Sulfate	0.97	J	1.0	0.70	mg/L			11/23/16 04:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:32	5
Barium	0.042		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:32	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:32	5
Calcium	2.4		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:32	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:32	5
Cobalt	0.0015	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000084	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWC-12
Date Collected: 11/15/16 12:15
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-9
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			11/23/16 05:01	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 05:01	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 05:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:36	5
Barium	0.0096		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:36	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:36	5
Calcium	0.61		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:36	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:36	5
Cobalt	0.00055	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00014	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-10

Date Collected: 11/15/16 14:40

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.7		1.0	0.89	mg/L			11/23/16 05:24	1
Fluoride	0.22		0.20	0.082	mg/L			11/23/16 05:24	1
Sulfate	3.5		1.0	0.70	mg/L			11/23/16 05:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:41	5
Barium	0.015		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:41	5
Boron	0.021	J	0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:41	5
Calcium	13		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:41	5
Chromium	0.0062		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:41	5
Lithium	0.0051		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:41	5

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		11/21/16 16:15	11/29/16 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	94		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-9
Date Collected: 11/15/16 14:40
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-11
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			11/23/16 05:47	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 05:47	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 05:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 19:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 19:45	5
Barium	0.029		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 19:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:45	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 19:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 19:45	5
Calcium	0.27		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 19:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 19:45	5
Cobalt	0.00053	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 19:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 19:45	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 19:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 19:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 19:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 19:45	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 13:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Client Sample ID: GWC-11
Date Collected: 11/15/16 16:08
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-12
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0		1.0	0.89	mg/L			11/23/16 06:32	1
Fluoride	0.43		0.20	0.082	mg/L			11/23/16 06:32	1
Sulfate	4.4		1.0	0.70	mg/L			11/23/16 06:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 20:12	5
Arsenic	0.0010	J	0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:12	5
Barium	0.011		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:12	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:12	5
Calcium	8.4		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:12	5
Chromium	0.0050		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:12	5
Lithium	0.0052		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:12	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000093	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-19

Date Collected: 11/15/16 16:45

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-13

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.8		1.0	0.89	mg/L			11/23/16 06:55	1
Fluoride	0.13	J	0.20	0.082	mg/L			11/23/16 06:55	1
Sulfate	2.2		1.0	0.70	mg/L			11/23/16 06:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 20:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:17	5
Barium	0.013		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:17	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:17	5
Calcium	7.5		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:17	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000078	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			11/18/16 17:47	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-20

Date Collected: 11/15/16 16:45

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-14

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.5		1.0	0.89	mg/L			11/23/16 07:18	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 07:18	1
Sulfate	1.9		1.0	0.70	mg/L			11/23/16 07:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 20:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:21	5
Barium	0.022		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:21	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:21	5
Calcium	1.3		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:21	5
Cobalt	0.0019	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:21	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:21	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000073	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	82		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: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-21
Date Collected: 11/15/16 15:30
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-15
Matrix: Water

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			11/23/16 08:26	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 08:26	1
Sulfate	1.0		1.0	0.70	mg/L			11/23/16 08:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 20:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:26	5
Barium	0.015		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:26	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:26	5
Calcium	1.1		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:26	5
Cobalt	0.0017	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:26	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:26	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00018	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		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: 400-130146-1
 SDG: LF #4

Client Sample ID: FB-1
Date Collected: 11/15/16 16:10
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-16
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/23/16 08:49	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 08:49	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 08:49	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 13:20	11/22/16 20:30	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:30	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:30	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:30	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		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: 400-130146-1
SDG: LF #4

Client Sample ID: FERB-1

Date Collected: 11/15/16 16:20

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-17

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			11/23/16 09:44	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 09:44	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 09:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 20:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:35	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:35	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:35	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			11/19/16 15:37	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: DUP-1

Date Collected: 11/15/16 00:00

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-18

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		1.0	0.89	mg/L			11/23/16 10:06	1
Fluoride	0.14	J	0.20	0.082	mg/L			11/23/16 10:06	1
Sulfate	1.4		1.0	0.70	mg/L			11/23/16 10:06	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		11/21/16 13:20	11/22/16 20:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:39	5
Barium	0.017		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:39	5
Beryllium	0.00052	J	0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:39	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:39	5
Cadmium	0.00039	J	0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:39	5
Calcium	2.0		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:39	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:39	5
Cobalt	0.00068	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			11/17/16 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: DUP-2

Date Collected: 11/15/16 00:00

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-19

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			11/23/16 10:31	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 10:31	1
Sulfate	0.86	J	1.0	0.70	mg/L			11/23/16 10:31	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		11/21/16 13:20	11/22/16 20:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 20:44	5
Barium	0.030		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 20:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:44	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 20:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 20:44	5
Calcium	0.24	J	0.25	0.13	mg/L		11/21/16 13:20	11/22/16 20:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 20:44	5
Cobalt	0.00053	J	0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 20:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 20:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 20:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 20:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 20:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 20:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/21/16 16:15	11/29/16 14:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			11/17/16 17:11	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

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.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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: 400-130146-1
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 11/15/16 09:30

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 00:22	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 18:20	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWA-5

Date Collected: 11/15/16 09:00

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 01:33	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 18:24	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWA-13

Date Collected: 11/15/16 09:15

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 01:58	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:09	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWA-14

Date Collected: 11/15/16 10:25

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 02:21	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:14	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWA-15

Lab Sample ID: 400-130146-5

Date Collected: 11/15/16 10:50

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 02:44	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:18	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-16

Lab Sample ID: 400-130146-6

Date Collected: 11/15/16 10:55

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 03:52	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:23	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-17

Lab Sample ID: 400-130146-7

Date Collected: 11/15/16 12:10

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 04:15	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:27	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-130146-8

Date Collected: 11/15/16 12:45

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 04:38	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:32	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-12

Lab Sample ID: 400-130146-9

Date Collected: 11/15/16 12:15

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 05:01	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:36	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-10

Lab Sample ID: 400-130146-10

Date Collected: 11/15/16 14:40

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 05:24	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:41	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-9

Lab Sample ID: 400-130146-11

Date Collected: 11/15/16 14:40

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 05:47	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 19:45	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:59	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-11

Lab Sample ID: 400-130146-12

Date Collected: 11/15/16 16:08

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 06:32	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:12	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-130146-13

Date Collected: 11/15/16 16:45

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 06:55	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:17	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331714	11/18/16 17:47	RRC	TAL PEN

Client Sample ID: GWC-20

Lab Sample ID: 400-130146-14

Date Collected: 11/15/16 16:45

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 07:18	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:21	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331809	11/19/16 15:37	RRC	TAL PEN

Client Sample ID: GWC-21

Lab Sample ID: 400-130146-15

Date Collected: 11/15/16 15:30

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 08:26	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:26	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331809	11/19/16 15:37	RRC	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-130146-16

Date Collected: 11/15/16 16:10

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 08:49	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:30	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331809	11/19/16 15:37	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Client Sample ID: FERB-1

Lab Sample ID: 400-130146-17

Date Collected: 11/15/16 16:20

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 09:44	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:35	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331809	11/19/16 15:37	RRC	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-130146-18

Date Collected: 11/15/16 00:00

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 10:06	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:39	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331538	11/17/16 17:11	TET	TAL PEN

Client Sample ID: DUP-2

Lab Sample ID: 400-130146-19

Date Collected: 11/15/16 00:00

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332315	11/23/16 10:31	KH1	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 20:44	AJR	TAL PEN
Total/NA	Prep	7470A			332004	11/21/16 16:15	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 14:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331538	11/17/16 17:11	TET	TAL PEN

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

HPLC/IC

Analysis Batch: 332315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total/NA	Water	300.0	
400-130146-2	GWA-5	Total/NA	Water	300.0	
400-130146-3	GWA-13	Total/NA	Water	300.0	
400-130146-4	GWA-14	Total/NA	Water	300.0	
400-130146-5	GWA-15	Total/NA	Water	300.0	
400-130146-6	GWC-16	Total/NA	Water	300.0	
400-130146-7	GWC-17	Total/NA	Water	300.0	
400-130146-8	GWC-1	Total/NA	Water	300.0	
400-130146-9	GWC-12	Total/NA	Water	300.0	
400-130146-10	GWC-10	Total/NA	Water	300.0	
400-130146-11	GWC-9	Total/NA	Water	300.0	
400-130146-12	GWC-11	Total/NA	Water	300.0	
400-130146-13	GWC-19	Total/NA	Water	300.0	
400-130146-14	GWC-20	Total/NA	Water	300.0	
400-130146-15	GWC-21	Total/NA	Water	300.0	
400-130146-16	FB-1	Total/NA	Water	300.0	
400-130146-17	FERB-1	Total/NA	Water	300.0	
400-130146-18	DUP-1	Total/NA	Water	300.0	
400-130146-19	DUP-2	Total/NA	Water	300.0	
MB 400-332315/35	Method Blank	Total/NA	Water	300.0	
LCS 400-332315/36	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-332315/37	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130146-1 MS	GWA-2	Total/NA	Water	300.0	
400-130146-1 MSD	GWA-2	Total/NA	Water	300.0	

Metals

Prep Batch: 331937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total Recoverable	Water	3005A	
400-130146-2	GWA-5	Total Recoverable	Water	3005A	
400-130146-3	GWA-13	Total Recoverable	Water	3005A	
400-130146-4	GWA-14	Total Recoverable	Water	3005A	
400-130146-5	GWA-15	Total Recoverable	Water	3005A	
400-130146-6	GWC-16	Total Recoverable	Water	3005A	
400-130146-7	GWC-17	Total Recoverable	Water	3005A	
400-130146-8	GWC-1	Total Recoverable	Water	3005A	
400-130146-9	GWC-12	Total Recoverable	Water	3005A	
400-130146-10	GWC-10	Total Recoverable	Water	3005A	
400-130146-11	GWC-9	Total Recoverable	Water	3005A	
400-130146-12	GWC-11	Total Recoverable	Water	3005A	
400-130146-13	GWC-19	Total Recoverable	Water	3005A	
400-130146-14	GWC-20	Total Recoverable	Water	3005A	
400-130146-15	GWC-21	Total Recoverable	Water	3005A	
400-130146-16	FB-1	Total Recoverable	Water	3005A	
400-130146-17	FERB-1	Total Recoverable	Water	3005A	
400-130146-18	DUP-1	Total Recoverable	Water	3005A	
400-130146-19	DUP-2	Total Recoverable	Water	3005A	
MB 400-331937/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-331937/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

Metals (Continued)

Prep Batch: 331937 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-2 MS	GWA-5	Total Recoverable	Water	3005A	
400-130146-2 MSD	GWA-5	Total Recoverable	Water	3005A	

Prep Batch: 332004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total/NA	Water	7470A	
400-130146-2	GWA-5	Total/NA	Water	7470A	
400-130146-3	GWA-13	Total/NA	Water	7470A	
400-130146-4	GWA-14	Total/NA	Water	7470A	
400-130146-5	GWA-15	Total/NA	Water	7470A	
400-130146-6	GWC-16	Total/NA	Water	7470A	
400-130146-7	GWC-17	Total/NA	Water	7470A	
400-130146-8	GWC-1	Total/NA	Water	7470A	
400-130146-9	GWC-12	Total/NA	Water	7470A	
400-130146-10	GWC-10	Total/NA	Water	7470A	
400-130146-11	GWC-9	Total/NA	Water	7470A	
400-130146-12	GWC-11	Total/NA	Water	7470A	
400-130146-13	GWC-19	Total/NA	Water	7470A	
400-130146-14	GWC-20	Total/NA	Water	7470A	
400-130146-15	GWC-21	Total/NA	Water	7470A	
400-130146-16	FB-1	Total/NA	Water	7470A	
400-130146-17	FERB-1	Total/NA	Water	7470A	
400-130146-18	DUP-1	Total/NA	Water	7470A	
400-130146-19	DUP-2	Total/NA	Water	7470A	
MB 400-332004/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-332004/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130146-1 MS	GWA-2	Total/NA	Water	7470A	
400-130146-1 MSD	GWA-2	Total/NA	Water	7470A	

Analysis Batch: 332176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total Recoverable	Water	6020	331937
400-130146-2	GWA-5	Total Recoverable	Water	6020	331937
400-130146-3	GWA-13	Total Recoverable	Water	6020	331937
400-130146-4	GWA-14	Total Recoverable	Water	6020	331937
400-130146-5	GWA-15	Total Recoverable	Water	6020	331937
400-130146-6	GWC-16	Total Recoverable	Water	6020	331937
400-130146-7	GWC-17	Total Recoverable	Water	6020	331937
400-130146-8	GWC-1	Total Recoverable	Water	6020	331937
400-130146-9	GWC-12	Total Recoverable	Water	6020	331937
400-130146-10	GWC-10	Total Recoverable	Water	6020	331937
400-130146-11	GWC-9	Total Recoverable	Water	6020	331937
400-130146-12	GWC-11	Total Recoverable	Water	6020	331937
400-130146-13	GWC-19	Total Recoverable	Water	6020	331937
400-130146-14	GWC-20	Total Recoverable	Water	6020	331937
400-130146-15	GWC-21	Total Recoverable	Water	6020	331937
400-130146-16	FB-1	Total Recoverable	Water	6020	331937
400-130146-17	FERB-1	Total Recoverable	Water	6020	331937
400-130146-18	DUP-1	Total Recoverable	Water	6020	331937
400-130146-19	DUP-2	Total Recoverable	Water	6020	331937
MB 400-331937/1-A ^5	Method Blank	Total Recoverable	Water	6020	331937

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Metals (Continued)

Analysis Batch: 332176 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-331937/2-A	Lab Control Sample	Total Recoverable	Water	6020	331937
400-130146-2 MS	GWA-5	Total Recoverable	Water	6020	331937
400-130146-2 MSD	GWA-5	Total Recoverable	Water	6020	331937

Analysis Batch: 332993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total/NA	Water	7470A	332004
400-130146-2	GWA-5	Total/NA	Water	7470A	332004
400-130146-3	GWA-13	Total/NA	Water	7470A	332004
400-130146-4	GWA-14	Total/NA	Water	7470A	332004
400-130146-5	GWA-15	Total/NA	Water	7470A	332004
400-130146-6	GWC-16	Total/NA	Water	7470A	332004
400-130146-7	GWC-17	Total/NA	Water	7470A	332004
400-130146-8	GWC-1	Total/NA	Water	7470A	332004
400-130146-9	GWC-12	Total/NA	Water	7470A	332004
400-130146-10	GWC-10	Total/NA	Water	7470A	332004
400-130146-11	GWC-9	Total/NA	Water	7470A	332004
400-130146-12	GWC-11	Total/NA	Water	7470A	332004
400-130146-13	GWC-19	Total/NA	Water	7470A	332004
400-130146-14	GWC-20	Total/NA	Water	7470A	332004
400-130146-15	GWC-21	Total/NA	Water	7470A	332004
400-130146-16	FB-1	Total/NA	Water	7470A	332004
400-130146-17	FERB-1	Total/NA	Water	7470A	332004
400-130146-18	DUP-1	Total/NA	Water	7470A	332004
400-130146-19	DUP-2	Total/NA	Water	7470A	332004
MB 400-332004/14-A	Method Blank	Total/NA	Water	7470A	332004
LCS 400-332004/15-A	Lab Control Sample	Total/NA	Water	7470A	332004
400-130146-1 MS	GWA-2	Total/NA	Water	7470A	332004
400-130146-1 MSD	GWA-2	Total/NA	Water	7470A	332004

General Chemistry

Analysis Batch: 331538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-18	DUP-1	Total/NA	Water	SM 2540C	
400-130146-19	DUP-2	Total/NA	Water	SM 2540C	
MB 400-331538/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331538/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130091-C-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 331714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total/NA	Water	SM 2540C	
400-130146-2	GWA-5	Total/NA	Water	SM 2540C	
400-130146-3	GWA-13	Total/NA	Water	SM 2540C	
400-130146-4	GWA-14	Total/NA	Water	SM 2540C	
400-130146-5	GWA-15	Total/NA	Water	SM 2540C	
400-130146-6	GWC-16	Total/NA	Water	SM 2540C	
400-130146-7	GWC-17	Total/NA	Water	SM 2540C	
400-130146-8	GWC-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

General Chemistry (Continued)

Analysis Batch: 331714 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-9	GWC-12	Total/NA	Water	SM 2540C	
400-130146-10	GWC-10	Total/NA	Water	SM 2540C	
400-130146-11	GWC-9	Total/NA	Water	SM 2540C	
400-130146-12	GWC-11	Total/NA	Water	SM 2540C	
400-130146-13	GWC-19	Total/NA	Water	SM 2540C	
MB 400-331714/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331714/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130146-4 DU	GWA-14	Total/NA	Water	SM 2540C	

Analysis Batch: 331809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-14	GWC-20	Total/NA	Water	SM 2540C	
400-130146-15	GWC-21	Total/NA	Water	SM 2540C	
400-130146-16	FB-1	Total/NA	Water	SM 2540C	
400-130146-17	FERB-1	Total/NA	Water	SM 2540C	
MB 400-331809/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331809/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130146-15 DU	GWC-21	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-332315/35
Matrix: Water
Analysis Batch: 332315

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			11/22/16 23:13	1
Fluoride	<0.082		0.20	0.082	mg/L			11/22/16 23:13	1
Sulfate	<0.70		1.0	0.70	mg/L			11/22/16 23:13	1

Lab Sample ID: LCS 400-332315/36
Matrix: Water
Analysis Batch: 332315

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	10.3		mg/L		103	90 - 110
Sulfate	10.0	9.73		mg/L		97	90 - 110

Lab Sample ID: LCSD 400-332315/37
Matrix: Water
Analysis Batch: 332315

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	10.3		mg/L		103	90 - 110	0	15
Sulfate	10.0	9.83		mg/L		98	90 - 110	1	15

Lab Sample ID: 400-130146-1 MS
Matrix: Water
Analysis Batch: 332315

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.2		10.0	15.8		mg/L		105	80 - 120
Fluoride	<0.082		10.0	10.8		mg/L		108	80 - 120
Sulfate	<0.70		10.0	10.6		mg/L		106	80 - 120

Lab Sample ID: 400-130146-1 MSD
Matrix: Water
Analysis Batch: 332315

Client Sample ID: GWA-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	5.2		10.0	15.8		mg/L		105	80 - 120	0	20
Fluoride	<0.082		10.0	10.8		mg/L		108	80 - 120	0	20
Sulfate	<0.70		10.0	10.5		mg/L		105	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-331937/1-A ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 331937

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 14:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 14:34	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

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

Lab Sample ID: MB 400-331937/1-A ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 331937

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 14:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 14:34	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 14:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 14:34	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 14:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 14:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 14:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 14:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 14:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 14:34	5
Selenium	0.000305	J	0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 14:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 14:34	5

Lab Sample ID: LCS 400-331937/2-A
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 331937

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Antimony	0.0500	0.0525		mg/L		105		80 - 120
Arsenic	0.0500	0.0516		mg/L		103		80 - 120
Barium	0.0500	0.0490		mg/L		98		80 - 120
Beryllium	0.0500	0.0476		mg/L		95		80 - 120
Boron	0.100	0.0957		mg/L		96		80 - 120
Cadmium	0.0500	0.0509		mg/L		102		80 - 120
Calcium	5.00	4.87		mg/L		97		80 - 120
Chromium	0.0500	0.0488		mg/L		98		80 - 120
Cobalt	0.0500	0.0499		mg/L		100		80 - 120
Lead	0.0500	0.0492		mg/L		98		80 - 120
Lithium	0.0500	0.0510		mg/L		102		80 - 120
Molybdenum	0.0500	0.0514		mg/L		103		80 - 120
Selenium	0.0500	0.0501		mg/L		100		80 - 120
Thallium	0.0100	0.0102		mg/L		102		80 - 120

Lab Sample ID: 400-130146-2 MS
Matrix: Water
Analysis Batch: 332176

Client Sample ID: GWA-5
Prep Type: Total Recoverable
Prep Batch: 331937

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Antimony	<0.0010		0.0500	0.0545		mg/L		109		75 - 125
Arsenic	<0.00046		0.0500	0.0514		mg/L		103		75 - 125
Barium	0.039		0.0500	0.0864		mg/L		94		75 - 125
Beryllium	<0.00034		0.0500	0.0476		mg/L		95		75 - 125
Boron	<0.021		0.100	0.101		mg/L		101		75 - 125
Cadmium	<0.00034		0.0500	0.0528		mg/L		106		75 - 125
Calcium	2.5		5.00	7.49		mg/L		99		75 - 125
Chromium	<0.0011		0.0500	0.0496		mg/L		99		75 - 125
Cobalt	0.00064	J	0.0500	0.0515		mg/L		102		75 - 125
Lead	<0.00035		0.0500	0.0500		mg/L		100		75 - 125
Lithium	<0.0032		0.0500	0.0530		mg/L		106		75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

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

Lab Sample ID: 400-130146-2 MS
Matrix: Water
Analysis Batch: 332176

Client Sample ID: GWA-5
Prep Type: Total Recoverable
Prep Batch: 331937

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	<0.00085		0.0500	0.0526		mg/L		105	75 - 125
Selenium	<0.00024		0.0500	0.0512		mg/L		102	75 - 125
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125

Lab Sample ID: 400-130146-2 MSD
Matrix: Water
Analysis Batch: 332176

Client Sample ID: GWA-5
Prep Type: Total Recoverable
Prep Batch: 331937

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125	4	20
Arsenic	<0.00046		0.0500	0.0508		mg/L		102	75 - 125	1	20
Barium	0.039		0.0500	0.0870		mg/L		95	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0470		mg/L		94	75 - 125	1	20
Boron	<0.021		0.100	0.0957		mg/L		96	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0527		mg/L		105	75 - 125	0	20
Calcium	2.5		5.00	7.38		mg/L		97	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0500		mg/L		100	75 - 125	1	20
Cobalt	0.00064	J	0.0500	0.0514		mg/L		102	75 - 125	0	20
Lead	<0.00035		0.0500	0.0495		mg/L		99	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0529		mg/L		106	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0512		mg/L		102	75 - 125	3	20
Selenium	<0.00024		0.0500	0.0512		mg/L		102	75 - 125	0	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-332004/14-A
Matrix: Water
Analysis Batch: 332993

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 332004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000785	J	0.00020	0.000070	mg/L		11/21/16 16:12	11/29/16 13:23	1

Lab Sample ID: LCS 400-332004/15-A
Matrix: Water
Analysis Batch: 332993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 332004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00100		mg/L		99	80 - 120

Lab Sample ID: 400-130146-1 MS
Matrix: Water
Analysis Batch: 332993

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 332004

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00203		mg/L		101	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-130146-1
SDG: LF #4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-130146-1 MSD
Matrix: Water
Analysis Batch: 332993

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 332004

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00206		mg/L		102	80 - 120	1	20

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

Lab Sample ID: MB 400-331538/1
Matrix: Water
Analysis Batch: 331538

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/17/16 17:11	1

Lab Sample ID: LCS 400-331538/2
Matrix: Water
Analysis Batch: 331538

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

Lab Sample ID: 400-130091-C-2 DU
Matrix: Water
Analysis Batch: 331538

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	66		66.0		mg/L		0	5

Lab Sample ID: MB 400-331714/1
Matrix: Water
Analysis Batch: 331714

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			11/18/16 17:47	1

Lab Sample ID: LCS 400-331714/2
Matrix: Water
Analysis Batch: 331714

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	272		mg/L		93	78 - 122

Lab Sample ID: 400-130146-4 DU
Matrix: Water
Analysis Batch: 331714

Client Sample ID: GWA-14
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	18		18.0		mg/L		0	5

QC Sample Results

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

TestAmerica Job ID: 400-130146-1
 SDG: LF #4

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

Lab Sample ID: MB 400-331809/1
Matrix: Water
Analysis Batch: 331809

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			11/19/16 15:37	1

Lab Sample ID: LCS 400-331809/2
Matrix: Water
Analysis Batch: 331809

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: 400-130146-15 DU
Matrix: Water
Analysis Batch: 331809

Client Sample ID: GWC-21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	58		58.0		mg/L		0	5

TestAmerica Pensacola
 3385 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Chain of Custody Record

TestAmerica

Center Tracking No: _____
 Lab Pk: _____
 Job #: 1 of 2
 Page: _____

Client Information
 Client Contact: Jolu Abraham
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State: GA
 ZIP: 30308
 Phone: 404-506-7239
 Email: JAbraham@southernco.com
 Project Name: CCR - Plant McIntosh
 Site: LF4

Due Date Requested: _____
 TAT Required (days): _____
 PO #: _____
 MO #: _____
 Project #: _____
 SSOW: _____

Sampler: *TP* ERM - T. Payne, M. Thomas, C. Hurdle, T. Tracy
 Lab Pk: Whitfire, Cheyenne R
 Wardell, W. Vilgozky
 E-Mail: cheyenne.whitfire@testamerica.com

Center Tracking No: _____
 Job #: 1 of 2
 Page: _____

Analysis Requested

Matrix	Sample Type (C=Com, G=Grab)	Sample Time	Sample Date	Field Filtered Sample (Yes or No)	Field Filtered Sample (Yes or No)	Performs MS/MSD (Yes or No)	TDS - 9M 2640C; CR-504 - EPA 300	Metals Appendix in 8. IV - EPA 8229 & EPA 7470	Radium 226 & 228 - 9M 248 9315 & 9320
	G	9:30	11/15/16	N	X	N			
	G	9:00	11/15/16	N	X	N			
	G	9:15	11/15/16	N	X	N			
	G	10:25	11/15/16	N	X	N			
	G	10:50	11/15/16	N	X	N			
	G	10:55	11/15/16	N	X	N			
	G	12:10	11/15/16	N	X	N			
	G	12:45	11/15/16	N	X	N			
	G	12:15	11/15/16	N	X	N			
	G	14:40	11/15/16	N	X	N			
	G	14:40	11/15/16	N	X	N			

Special Instructions/Notes:

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other: _____

Preservation Codes:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2CO3
 Q - NiPSO3
 R - NiPSO3
 S - H2SO4
 T - TSP Dichlorohydrate
 U - Acetone
 V - MeCAA
 W - pH 4.5
 X - EDTA
 Y - EDA
 Z - Other (specify)

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Unknown Radiological
 Poison B Polson B

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *J.V.V.* Date: 11/16/16
 Relinquished by: _____ Date/Time: 10:05
 Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Custody Seals Intact
 Δ Yes Δ No

Custody Seal No.: _____

Received by: *LE* Date/Time: 11-16-16 10:05
 Received by: _____ Date/Time: 11/17/2016 8:37
 Received by: *J. Padilla* Date/Time: 11/17/16 08:37
 Cooler Temperature: 1.9°C

Method of Shipment: _____

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

Special Instructions/OC Requirements: Please also provide results to Maria Padilla and Heath McConkle

Method of Shipment: _____

Received by: *LE* Date/Time: 11-16-16 10:05
 Received by: _____ Date/Time: 11/17/2016 8:37
 Received by: *J. Padilla* Date/Time: 11/17/16 08:37
 Cooler Temperature: 1.9°C

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Custody Seals Intact
 Δ Yes Δ No

Custody Seal No.: _____

TestAmerica Pensacola
 3355 McLambone Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

TestAmerica

Chain of Custody Record

Client Information
 Client Contact: Joli 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: LF4

Sampler: ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo
Lab Pk: Whitmore, Cheyenne R
Phone: 878-466-2700
E-Mail: cheyenne.whitmore@testamericainc.com

DOC No: _____
Page: 2 of 2
Job #: _____

Analysis Requested

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Preservation Code	Matrix (W=Water, S=Soil, D=Dust, L=Liquid, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Methods Appendix III & IV - EPA 8020 & EPA 7470	Methods Appendix III & IV - EPA 8020 & EPA 7470	Radionuclide 228 Ra, 228 - SW 466 0315 & 0320	Total Number of Containers	Special Instructions/Notes
GWC-11	11/15/16	15:08	G	W		N	X				3	
GWC-19	11/15/16	16:45	G	W		N	X				3	
GWC-20	11/15/16	16:45	G	W		N	X				3	
GWC-21	11/15/16	16:30	G	W		N	X				3	
FB-1	11/15/16	16:10	G	W		N	X				3	
FERB-1	11/15/16	16:20	G	W		N	X				3	
DUP-1	11/15/16	-	G	W		N	X				3	
DUP-2	11/15/16	-	G	W		N	X				3	

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitro Acid
 E - NaHSO4
 F - HNO3
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other: _____

Preservation Codes:
 M - Hexane
 N - None
 O - Acetic Acid
 P - Na2CO3
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecylhydrate
 U - Acetone
 V - KCAA
 W - pH 4.8
 X - EDTA
 Y - EDA
 Z - other (specify)

Analysis Requested

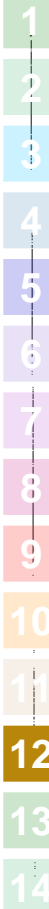
Sample Disposal: A fee may be assessed if samples are retained longer than 1 month.
 Return To Client Dispose By Lab Archive For _____ Months
 Special Instructions/OC Requirements: Please also provide results to Maria Padilla and Heath McCorkle

Empty Kit Relinquished by: _____
Relinquished by: Wil Virgo
Relinquished by: _____
Relinquished by: _____

Date: 11/16/16
Time: 10:05
Company: ERM
Company: _____
Company: _____

Date: 11/16/16
Time: 08:37
Company: TA
Company: _____
Company: _____

Custody Seal Intact:
 A Yes Δ No



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130146-1

SDG Number: LF #4

Login Number: 130146

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1°C, 0.6°C, 1.0°C, 0.4°C, 0.9°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: 400-130146-1
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

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: 400-130146-2

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

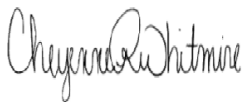
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/29/2016 8:17:29 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: 400-130146-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130146-1	GWA-2	Water	11/15/16 09:30	11/16/16 10:05
400-130146-2	GWA-5	Water	11/15/16 09:00	11/16/16 10:05
400-130146-3	GWA-13	Water	11/15/16 09:15	11/16/16 10:05
400-130146-4	GWA-14	Water	11/15/16 10:25	11/16/16 10:05
400-130146-5	GWA-15	Water	11/15/16 10:50	11/16/16 10:05
400-130146-6	GWC-16	Water	11/15/16 10:55	11/16/16 10:05
400-130146-7	GWC-17	Water	11/15/16 12:10	11/16/16 10:05
400-130146-8	GWC-1	Water	11/15/16 12:45	11/16/16 10:05
400-130146-9	GWC-12	Water	11/15/16 12:15	11/16/16 10:05
400-130146-10	GWC-10	Water	11/15/16 14:40	11/16/16 10:05
400-130146-11	GWC-9	Water	11/15/16 14:40	11/16/16 10:05
400-130146-12	GWC-11	Water	11/15/16 16:08	11/16/16 10:05
400-130146-13	GWC-19	Water	11/15/16 16:45	11/16/16 10:05
400-130146-14	GWC-20	Water	11/15/16 16:45	11/16/16 10:05
400-130146-15	GWC-21	Water	11/15/16 15:30	11/16/16 10:05
400-130146-16	FB-1	Water	11/15/16 16:10	11/16/16 10:05
400-130146-17	FERB-1	Water	11/15/16 16:20	11/16/16 10:05
400-130146-18	DUP-1	Water	11/15/16 00:00	11/16/16 10:05
400-130146-19	DUP-2	Water	11/15/16 00:00	11/16/16 10:05

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 11/15/16 09:30
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-1
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	0.410		0.207	0.210	1.00	0.250	pCi/L	11/23/16 10:21	12/26/16 19:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.5		40 - 110					11/23/16 10:21	12/26/16 19:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.194	U	0.310	0.310	1.00	0.522	pCi/L	11/23/16 10:59	12/23/16 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.5		40 - 110					11/23/16 10:59	12/23/16 17:30	1
Y Carrier	89.3		40 - 110					11/23/16 10:59	12/23/16 17:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.603		0.373	0.375	5.00	0.522	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWA-5
Date Collected: 11/15/16 09:00
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-2
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	0.391		0.189	0.192	1.00	0.224	pCi/L	11/23/16 10:21	12/26/16 19:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					11/23/16 10:21	12/26/16 19:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.574		0.290	0.295	1.00	0.429	pCi/L	11/23/16 10:59	12/23/16 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					11/23/16 10:59	12/23/16 17:30	1
Y Carrier	90.5		40 - 110					11/23/16 10:59	12/23/16 17:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.965		0.346	0.352	5.00	0.429	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWA-13
Date Collected: 11/15/16 09:15
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-3
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	0.520		0.240	0.245	1.00	0.287	pCi/L	11/23/16 10:21	12/26/16 19:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.4		40 - 110					11/23/16 10:21	12/26/16 19:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.542	U	0.377	0.380	1.00	0.587	pCi/L	11/23/16 10:59	12/23/16 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.4		40 - 110					11/23/16 10:59	12/23/16 17:30	1
Y Carrier	85.6		40 - 110					11/23/16 10:59	12/23/16 17:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.06		0.447	0.452	5.00	0.587	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWA-14
Date Collected: 11/15/16 10:25
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-4
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	0.229	U	0.220	0.221	1.00	0.342	pCi/L	11/23/16 10:21	12/26/16 19:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	51.0		40 - 110					11/23/16 10:21	12/26/16 19:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.166	U	0.314	0.315	1.00	0.533	pCi/L	11/23/16 10:59	12/23/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					11/23/16 10:59	12/23/16 17:31	1
Y Carrier	87.9		40 - 110					11/23/16 10:59	12/23/16 17:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.395	U	0.384	0.385	5.00	0.533	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWA-15

Date Collected: 11/15/16 10:50

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-5

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	0.198	U	0.198	0.199	1.00	0.314	pCi/L	11/23/16 10:21	12/26/16 19:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.2		40 - 110					11/23/16 10:21	12/26/16 19:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.481	U	0.367	0.369	1.00	0.577	pCi/L	11/23/16 10:59	12/23/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.2		40 - 110					11/23/16 10:59	12/23/16 17:31	1
Y Carrier	87.5		40 - 110					11/23/16 10:59	12/23/16 17:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.679		0.417	0.420	5.00	0.577	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWC-16

Lab Sample ID: 400-130146-6

Date Collected: 11/15/16 10:55

Matrix: Water

Date Received: 11/16/16 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.307		0.179	0.181	1.00	0.238	pCi/L	11/23/16 10:21	12/26/16 19:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					11/23/16 10:21	12/26/16 19:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.294	U	0.278	0.280	1.00	0.449	pCi/L	11/23/16 10:59	12/23/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					11/23/16 10:59	12/23/16 17:31	1
Y Carrier	81.1		40 - 110					11/23/16 10:59	12/23/16 17:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.600		0.331	0.333	5.00	0.449	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-17
Date Collected: 11/15/16 12:10
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-7
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	0.450		0.211	0.215	1.00	0.252	pCi/L	11/23/16 10:21	12/26/16 19:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					11/23/16 10:21	12/26/16 19:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.138	U	0.285	0.285	1.00	0.489	pCi/L	11/23/16 10:59	12/23/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					11/23/16 10:59	12/23/16 17:31	1
Y Carrier	82.6		40 - 110					11/23/16 10:59	12/23/16 17:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.589		0.355	0.357	5.00	0.489	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-1
Date Collected: 11/15/16 12:45
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-8
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	0.377		0.198	0.200	1.00	0.235	pCi/L	11/23/16 10:21	12/26/16 19:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					11/23/16 10:21	12/26/16 19:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.270	U	0.335	0.335	1.00	0.554	pCi/L	11/23/16 10:59	12/23/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					11/23/16 10:59	12/23/16 17:31	1
Y Carrier	87.9		40 - 110					11/23/16 10:59	12/23/16 17:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.647		0.389	0.391	5.00	0.554	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWC-12

Lab Sample ID: 400-130146-9

Date Collected: 11/15/16 12:15

Matrix: Water

Date Received: 11/16/16 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220	U	0.164	0.166	1.00	0.235	pCi/L	11/23/16 10:21	12/26/16 19:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					11/23/16 10:21	12/26/16 19:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.123	U	0.254	0.255	1.00	0.436	pCi/L	11/23/16 10:59	12/23/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					11/23/16 10:59	12/23/16 17:31	1
Y Carrier	89.0		40 - 110					11/23/16 10:59	12/23/16 17:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.344	U	0.303	0.304	5.00	0.436	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-10

Date Collected: 11/15/16 14:40

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-10

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	0.0358	U	0.112	0.112	1.00	0.214	pCi/L	11/23/16 10:21	12/26/16 19:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					11/23/16 10:21	12/26/16 19:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.232	0.232	1.00	0.401	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	87.1		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.138	U	0.258	0.258	5.00	0.401	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-9
Date Collected: 11/15/16 14:40
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-11
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	0.505		0.217	0.222	1.00	0.259	pCi/L	11/23/16 10:21	12/26/16 19:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/23/16 10:21	12/26/16 19:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0826	U	0.287	0.287	1.00	0.500	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	84.1		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.588		0.360	0.363	5.00	0.500	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-11

Date Collected: 11/15/16 16:08

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-12

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	0.175	U	0.151	0.152	1.00	0.226	pCi/L	11/23/16 10:21	12/26/16 19:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					11/23/16 10:21	12/26/16 19:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.250	U	0.244	0.245	1.00	0.394	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	93.1		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.424		0.287	0.288	5.00	0.394	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-130146-13

Date Collected: 11/15/16 16:45

Matrix: Water

Date Received: 11/16/16 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.295		0.175	0.177	1.00	0.226	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.237	U	0.263	0.264	1.00	0.431	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	93.5		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.532		0.316	0.318	5.00	0.431	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-20

Date Collected: 11/15/16 16:45

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-14

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	0.322		0.196	0.198	1.00	0.267	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.263	U	0.326	0.327	1.00	0.539	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	84.9		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.586		0.380	0.382	5.00	0.539	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: GWC-21
Date Collected: 11/15/16 15:30
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-15
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.354		0.227	0.229	1.00	0.306	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	54.1		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.372	U	0.391	0.392	1.00	0.638	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	54.1		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	93.5		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.726		0.452	0.454	5.00	0.638	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: FB-1
Date Collected: 11/15/16 16:10
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-16
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	0.142	U	0.141	0.142	1.00	0.221	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.000	U	0.239	0.239	1.00	0.430	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	89.0		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.142	U	0.277	0.278	5.00	0.430	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: FERB-1

Lab Sample ID: 400-130146-17

Date Collected: 11/15/16 16:20

Matrix: Water

Date Received: 11/16/16 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0632	U	0.124	0.124	1.00	0.222	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0399	U	0.311	0.311	1.00	0.554	pCi/L	11/23/16 10:59	12/23/16 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					11/23/16 10:59	12/23/16 17:32	1
Y Carrier	89.7		40 - 110					11/23/16 10:59	12/23/16 17:32	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	0.0233	U	0.335	0.335	5.00	0.554	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 11/15/16 00:00
Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-18
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.466		0.206	0.210	1.00	0.238	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.289	U	0.334	0.335	1.00	0.551	pCi/L	11/23/16 10:59	12/23/16 17:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					11/23/16 10:59	12/23/16 17:22	1
Y Carrier	92.3		40 - 110					11/23/16 10:59	12/23/16 17:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.755		0.393	0.396	5.00	0.551	pCi/L		12/28/16 09:53	1

Client Sample Results

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: DUP-2

Date Collected: 11/15/16 00:00

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-19

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	0.440		0.191	0.195	1.00	0.215	pCi/L	11/23/16 10:21	12/26/16 19:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					11/23/16 10:21	12/26/16 19:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.468	U	0.328	0.331	1.00	0.514	pCi/L	11/23/16 10:59	12/23/16 17:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					11/23/16 10:59	12/23/16 17:22	1
Y Carrier	84.9		40 - 110					11/23/16 10:59	12/23/16 17:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.909		0.379	0.384	5.00	0.514	pCi/L		12/28/16 09:53	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 11/15/16 09:30

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWA-5

Date Collected: 11/15/16 09:00

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWA-13

Date Collected: 11/15/16 09:15

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWA-14

Date Collected: 11/15/16 10:25

Date Received: 11/16/16 10:05

Lab Sample ID: 400-130146-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWA-15

Lab Sample ID: 400-130146-5

Date Collected: 11/15/16 10:50

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-16

Lab Sample ID: 400-130146-6

Date Collected: 11/15/16 10:55

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-17

Lab Sample ID: 400-130146-7

Date Collected: 11/15/16 12:10

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-130146-8

Date Collected: 11/15/16 12:45

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWC-12

Lab Sample ID: 400-130146-9

Date Collected: 11/15/16 12:15

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-10

Lab Sample ID: 400-130146-10

Date Collected: 11/15/16 14:40

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285356	12/26/16 19:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-9

Lab Sample ID: 400-130146-11

Date Collected: 11/15/16 14:40

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-11

Lab Sample ID: 400-130146-12

Date Collected: 11/15/16 16:08

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: GWC-19

Lab Sample ID: 400-130146-13

Date Collected: 11/15/16 16:45

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-20

Lab Sample ID: 400-130146-14

Date Collected: 11/15/16 16:45

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: GWC-21

Lab Sample ID: 400-130146-15

Date Collected: 11/15/16 15:30

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-130146-16

Date Collected: 11/15/16 16:10

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Client Sample ID: FERB-1

Lab Sample ID: 400-130146-17

Date Collected: 11/15/16 16:20

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285294	12/23/16 17:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-130146-18

Date Collected: 11/15/16 00:00

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285334	12/23/16 17:22	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	RTM	TAL SL

Client Sample ID: DUP-2

Lab Sample ID: 400-130146-19

Date Collected: 11/15/16 00:00

Matrix: Water

Date Received: 11/16/16 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280794	11/23/16 10:21	AS	TAL SL
Total/NA	Analysis	9315		1	285355	12/26/16 19:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280812	11/23/16 10:59	AS	TAL SL
Total/NA	Analysis	9320		1	285334	12/23/16 17:22	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285684	12/28/16 09:53	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: 400-130146-2
 SDG: LF #4

Rad

Prep Batch: 280794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total/NA	Water	PrecSep-21	
400-130146-2	GWA-5	Total/NA	Water	PrecSep-21	
400-130146-3	GWA-13	Total/NA	Water	PrecSep-21	
400-130146-4	GWA-14	Total/NA	Water	PrecSep-21	
400-130146-5	GWA-15	Total/NA	Water	PrecSep-21	
400-130146-6	GWC-16	Total/NA	Water	PrecSep-21	
400-130146-7	GWC-17	Total/NA	Water	PrecSep-21	
400-130146-8	GWC-1	Total/NA	Water	PrecSep-21	
400-130146-9	GWC-12	Total/NA	Water	PrecSep-21	
400-130146-10	GWC-10	Total/NA	Water	PrecSep-21	
400-130146-11	GWC-9	Total/NA	Water	PrecSep-21	
400-130146-12	GWC-11	Total/NA	Water	PrecSep-21	
400-130146-13	GWC-19	Total/NA	Water	PrecSep-21	
400-130146-14	GWC-20	Total/NA	Water	PrecSep-21	
400-130146-15	GWC-21	Total/NA	Water	PrecSep-21	
400-130146-16	FB-1	Total/NA	Water	PrecSep-21	
400-130146-17	FERB-1	Total/NA	Water	PrecSep-21	
400-130146-18	DUP-1	Total/NA	Water	PrecSep-21	
400-130146-19	DUP-2	Total/NA	Water	PrecSep-21	
MB 160-280794/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-280794/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-130146-4 DU	GWA-14	Total/NA	Water	PrecSep-21	
400-130146-10 DU	GWC-10	Total/NA	Water	PrecSep-21	

Prep Batch: 280812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130146-1	GWA-2	Total/NA	Water	PrecSep_0	
400-130146-2	GWA-5	Total/NA	Water	PrecSep_0	
400-130146-3	GWA-13	Total/NA	Water	PrecSep_0	
400-130146-4	GWA-14	Total/NA	Water	PrecSep_0	
400-130146-5	GWA-15	Total/NA	Water	PrecSep_0	
400-130146-6	GWC-16	Total/NA	Water	PrecSep_0	
400-130146-7	GWC-17	Total/NA	Water	PrecSep_0	
400-130146-8	GWC-1	Total/NA	Water	PrecSep_0	
400-130146-9	GWC-12	Total/NA	Water	PrecSep_0	
400-130146-10	GWC-10	Total/NA	Water	PrecSep_0	
400-130146-11	GWC-9	Total/NA	Water	PrecSep_0	
400-130146-12	GWC-11	Total/NA	Water	PrecSep_0	
400-130146-13	GWC-19	Total/NA	Water	PrecSep_0	
400-130146-14	GWC-20	Total/NA	Water	PrecSep_0	
400-130146-15	GWC-21	Total/NA	Water	PrecSep_0	
400-130146-16	FB-1	Total/NA	Water	PrecSep_0	
400-130146-17	FERB-1	Total/NA	Water	PrecSep_0	
400-130146-18	DUP-1	Total/NA	Water	PrecSep_0	
400-130146-19	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-280812/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-280812/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-130146-4 DU	GWA-14	Total/NA	Water	PrecSep_0	
400-130146-10 DU	GWC-10	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-280794/1-A
Matrix: Water
Analysis Batch: 285356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280794

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06307	U	0.123	0.124	1.00	0.221	pCi/L	11/23/16 10:21	12/26/16 19:08	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					11/23/16 10:21	12/26/16 19:08	1

Lab Sample ID: LCS 160-280794/2-A
Matrix: Water
Analysis Batch: 285356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280794

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	13.24		1.51	1.00	0.241	pCi/L	119	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	85.5		40 - 110						

Lab Sample ID: 400-130146-4 DU
Matrix: Water
Analysis Batch: 285356

Client Sample ID: GWA-14
Prep Type: Total/NA
Prep Batch: 280794

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.229	U	0.1810	U	0.175	1.00	0.271	pCi/L	0.12	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	67.8		40 - 110							

Lab Sample ID: 400-130146-10 DU
Matrix: Water
Analysis Batch: 285355

Client Sample ID: GWC-10
Prep Type: Total/NA
Prep Batch: 280794

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0358	U	0.02679	U	0.143	1.00	0.270	pCi/L	0.04	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	82.1		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-130146-2
SDG: LF #4

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-280812/1-A
Matrix: Water
Analysis Batch: 285293

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280812

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3061	U	0.285	0.287	1.00	0.459	pCi/L	11/23/16 10:59	12/23/16 17:29	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					11/23/16 10:59	12/23/16 17:29	1
Y Carrier	81.1		40 - 110					11/23/16 10:59	12/23/16 17:29	1

Lab Sample ID: LCS 160-280812/2-A
Matrix: Water
Analysis Batch: 285293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280812

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	14.34		1.57	1.00	0.407	pCi/L	102	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	85.5		40 - 110						
Y Carrier	91.2		40 - 110						

Lab Sample ID: 400-130146-4 DU
Matrix: Water
Analysis Batch: 285294

Client Sample ID: GWA-14
Prep Type: Total/NA
Prep Batch: 280812

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.166	U	0.1178	U	0.312	1.00	0.540	pCi/L	0.08	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	67.8		40 - 110							
Y Carrier	85.6		40 - 110							

Lab Sample ID: 400-130146-10 DU
Matrix: Water
Analysis Batch: 285294

Client Sample ID: GWC-10
Prep Type: Total/NA
Prep Batch: 280812

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.102	U	0.3068	U	0.282	1.00	0.450	pCi/L	0.40	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	82.1		40 - 110							
Y Carrier	83.7		40 - 110							

QC Sample Results

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

TestAmerica Job ID: 400-130146-2
 SDG: LF #4

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

Lab Sample ID: 400-130146-4 DU
Matrix: Water
Analysis Batch: 285684

Client Sample ID: GWA-14
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	0.395	U	0.2988	U	0.358	5.00	0.540	pCi/L	0.13	

Lab Sample ID: 400-130146-10 DU
Matrix: Water
Analysis Batch: 285684

Client Sample ID: GWC-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	0.138	U	0.3336	U	0.316	5.00	0.450	pCi/L	0.34	

TestAmerica Pensacola
 3385 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Chain of Custody Record

TestAmerica

Client Information Client Contact: Jolu Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: LF4		Lab P#: Whitfire, Cheyenne R E-Mail: cheyenne.whitfire@testamerica.com Center Tracking No: 1 of 2	
Sample Information Sampler: T.D. Whitfire ERM - T. Payne, M. Thomas, C. Hurdle, T. Tracy Wardell, W. Vilgozky Phone: 878-498-2700		Analysis Requested Due Date Requested: TAT Required (days): PO #: MO #: Project #: SSOW: LF4	
Sample Identification Sample ID: GWA-2 Sample Date: 11/15/16 Sample Time: 9:30 Sample Type (C=Com, G=Grab): G Matrix (Element, Analyte, Compound): W Preservation Code: N		Field Filtered Sample (Yes or No) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Field Filtered Sample (Yes or No) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> TDS - 9M 2640C; CR-504 - EPA 300 Metals Appendix in 8. IV - EPA 8229 & EPA 7470 Radium 226 & 228 - 9M 248 9315 & 9320	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2CO3 Q - NiPSO3 R - NiPSO3 S - H2SO4 T - TSP Diethyleneglycol U - Acetone V - MeCAA W - pH 4-5 X - EDTA Y - EDA Z - Other (specify)	
Special Instructions/Notes: Total Number of Containers: 3 Extra radium volume collected for Lab: 3 Extra radium volume collected for Lab: 3 Extra radium volume collected for Lab: 4 GAWC Extra radium volume collected for Lab: 3 Extra radium volume collected for Lab: 3 Extra radium volume collected for Lab: 3 Extra radium volume collected for Lab: 3 Extra radium volume collected for Lab: 4 GAWC Extra radium volume collected for Lab: 3		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 McConkle	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input type="checkbox"/> Radiobiological Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: Y.V.V. [Signature] Date/Time: 11/16/16 10:05 Company: ERM	
Relinquished by: Y.V.V. [Signature] Date/Time: 11/16/16 10:05 Company: ERM		Relinquished by: [Signature] Date/Time: 11/17/2016 8:37 Company: [Signature]	
Relinquished by: [Signature] Date/Time: 11/17/16 08:37 Company: [Signature]		Relinquished by: [Signature] Date/Time: 11/17/16 08:37 Company: [Signature]	
Custody Seals Intact Δ Yes Δ No		Custody Seal No.: 19°C 125	



TestAmerica Pensacola
 3355 McLambone Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

TestAmerica

Chain of Custody Record

Client Information
 Client Contact: Joli 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: LF4

Sampler: ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo
Lab PI: Whitmore, Cheyenne R
Phone: 878-466-2700
E-Mail: cheyenne.whitmore@testamericainc.com

DOC No: _____
Page: 2 of 2
Job #: _____

Analysis Requested

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Preservation Code	Matrix (W=water, S=solid, D=dust, L=liquid)	Field Filtered Sample (Yes or No)	Performs MS/MSD (Yes or No)	TDG #4264C: C1F, S04 - EPA 306	Metals Appendix III & IV - EPA 8020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Notes
GWC-11	11/15/16	15:08	G	W		N	X	1	1	1	3	
GWC-19	11/15/16	16:45	G	W		N	X	1	1	1	3	
GWC-20	11/15/16	16:45	G	W		N	X	1	1	1	3	
GWC-21	11/15/16	16:30	G	W		N	X	1	1	1	3	
FB-1	11/15/16	16:10	G	W		N	X	1	1	1	3	
FERB-1	11/15/16	16:20	G	W		N	X	1	1	1	3	
DUP-1	11/15/16	-	G	W		N	X	1	1	1	3	
DUP-2	11/15/16	-	G	W		N	X	1	1	1	3	

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitro Acid
 E - NaHSO4
 F - HNO3
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other: _____

Matrix Codes:
 M - Hexane
 N - None
 O - Acetic Acid
 P - Na2CO3
 Q - Na2SO3
 R - Na2SO4
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - KCAA
 W - ph-4g
 X - other (specify)

Possible Hazard Identification
 Non-Hazard
 Flammable
 Skin Irritant
 Unknown
 Poison B
 Radiochemical
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____
Relinquished by: Wil Virgo
Relinquished by: _____
Relinquished by: _____

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

Special Instructions/OC Requirements: Please also provide results to Maria Padilla and Heath McCorkle

Received by: _____
Date/Time: 11/16/16 10:05
Company: ERM
Received by: _____
Date/Time: 11/17/16 08:37
Company: TA
Received by: _____
Date/Time: 11/17/16 12:50
Company: TA

Custody Seal Intact:
 A Yes
 B No



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130146-2

SDG Number: LF #4

Login Number: 130146

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1°C, 0.6°C, 1.0°C, 0.4°C, 0.9°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: 400-130146-2
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-130146-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

* Certification renewal pending - certification considered valid.

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: 400-130325-1

TestAmerica Sample Delivery Group: LF #4

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:

12/1/2016 10:08:18 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

Job ID: 400-130325-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-130325-1

Metals

Method(s) 7470A: The method blank for prep batch 332715 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

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Detection Summary

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

TestAmerica Job ID: 400-130325-1
 SDG: LF #4

Client Sample ID: GWC-18

Lab Sample ID: 400-130325-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.71		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
Arsenic	0.00046	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0019	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-22

Lab Sample ID: 400-130325-2

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	0.22		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.9		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00060	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.061		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0020	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0013	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-23

Lab Sample ID: 400-130325-3

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	0.092	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.2		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0063		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-2

Lab Sample ID: 400-130325-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000070	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	80		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

Client Sample ID: FERB-2

Lab Sample ID: 400-130325-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00082	J	0.0025	0.00049	mg/L	5		6020	Total
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Recoverable 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: 400-130325-1
SDG: LF #4

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: 400-130325-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130325-1	GWC-18	Water	11/16/16 09:39	11/18/16 08:33
400-130325-2	GWC-22	Water	11/16/16 09:00	11/18/16 08:33
400-130325-3	GWC-23	Water	11/16/16 09:05	11/18/16 08:33
400-130325-4	FB-2	Water	11/16/16 09:20	11/18/16 08:33
400-130325-5	FERB-2	Water	11/16/16 09:30	11/18/16 08:33

- 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: 400-130325-1
 SDG: LF #4

Client Sample ID: GWC-18

Lab Sample ID: 400-130325-1

Date Collected: 11/16/16 09:39

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	5.2		1.0	0.89	mg/L			11/23/16 21:56	1
Fluoride	0.71		0.20	0.082	mg/L			11/23/16 21:56	1
Sulfate	4.9		1.0	0.70	mg/L			11/23/16 21:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/22/16 08:30	11/22/16 22:05	5
Arsenic	0.00046	J	0.0013	0.00046	mg/L		11/22/16 08:30	11/22/16 22:05	5
Barium	0.022		0.0025	0.00049	mg/L		11/22/16 08:30	11/22/16 22:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:05	5
Boron	<0.021		0.050	0.021	mg/L		11/22/16 08:30	11/22/16 22:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:05	5
Calcium	17		0.25	0.13	mg/L		11/22/16 08:30	11/22/16 22:05	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		11/22/16 08:30	11/22/16 22:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/22/16 08:30	11/22/16 22:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/22/16 08:30	11/22/16 22:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/22/16 08:30	11/22/16 22:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/22/16 08:30	11/22/16 22:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/22/16 08:30	11/22/16 22:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/22/16 08:30	11/22/16 22:05	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		11/28/16 08:31	11/29/16 12:53	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: 400-130325-1
 SDG: LF #4

Client Sample ID: GWC-22

Date Collected: 11/16/16 09:00

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-2

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			11/23/16 22:19	1
Fluoride	0.22		0.20	0.082	mg/L			11/23/16 22:19	1
Sulfate	8.9		1.0	0.70	mg/L			11/23/16 22:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/22/16 08:30	11/22/16 22:32	5
Arsenic	0.00060	J	0.0013	0.00046	mg/L		11/22/16 08:30	11/22/16 22:32	5
Barium	0.061		0.0025	0.00049	mg/L		11/22/16 08:30	11/22/16 22:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:32	5
Boron	<0.021		0.050	0.021	mg/L		11/22/16 08:30	11/22/16 22:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:32	5
Calcium	16		0.25	0.13	mg/L		11/22/16 08:30	11/22/16 22:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/22/16 08:30	11/22/16 22:32	5
Cobalt	0.0020	J	0.0025	0.00040	mg/L		11/22/16 08:30	11/22/16 22:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/22/16 08:30	11/22/16 22:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/22/16 08:30	11/22/16 22:32	5
Molybdenum	0.0013	J	0.015	0.00085	mg/L		11/22/16 08:30	11/22/16 22:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/22/16 08:30	11/22/16 22:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/22/16 08:30	11/22/16 22:32	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		11/28/16 08:43	11/29/16 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		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: 400-130325-1
 SDG: LF #4

Client Sample ID: GWC-23
Date Collected: 11/16/16 09:05
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-3
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			11/23/16 22:41	1
Fluoride	0.092	J	0.20	0.082	mg/L			11/23/16 22:41	1
Sulfate	3.2		1.0	0.70	mg/L			11/23/16 22:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/22/16 08:30	11/22/16 22:36	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		11/22/16 08:30	11/22/16 22:36	5
Barium	0.057		0.0025	0.00049	mg/L		11/22/16 08:30	11/22/16 22:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:36	5
Boron	<0.021		0.050	0.021	mg/L		11/22/16 08:30	11/22/16 22:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:36	5
Calcium	8.4		0.25	0.13	mg/L		11/22/16 08:30	11/22/16 22:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/22/16 08:30	11/22/16 22:36	5
Cobalt	0.0063		0.0025	0.00040	mg/L		11/22/16 08:30	11/22/16 22:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/22/16 08:30	11/22/16 22:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/22/16 08:30	11/22/16 22:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/22/16 08:30	11/22/16 22:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/22/16 08:30	11/22/16 22:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/22/16 08:30	11/22/16 22:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/28/16 08:43	11/29/16 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	98		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130325-1
 SDG: LF #4

Client Sample ID: FB-2
Date Collected: 11/16/16 09:20
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-4
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			11/23/16 23:27	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 23:27	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 23:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/22/16 08:30	11/22/16 22:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/22/16 08:30	11/22/16 22:41	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/22/16 08:30	11/22/16 22:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:41	5
Boron	<0.021		0.050	0.021	mg/L		11/22/16 08:30	11/22/16 22:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:41	5
Calcium	<0.13		0.25	0.13	mg/L		11/22/16 08:30	11/22/16 22:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/22/16 08:30	11/22/16 22:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/22/16 08:30	11/22/16 22:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/22/16 08:30	11/22/16 22:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/22/16 08:30	11/22/16 22:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/22/16 08:30	11/22/16 22:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/22/16 08:30	11/22/16 22:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/22/16 08:30	11/22/16 22:41	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 08:43	11/29/16 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	80		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: 400-130325-1
 SDG: LF #4

Client Sample ID: FERB-2

Date Collected: 11/16/16 09:30

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-5

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			11/23/16 23:50	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 23:50	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 23:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/22/16 08:30	11/22/16 22:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/22/16 08:30	11/22/16 22:45	5
Barium	0.00082	J	0.0025	0.00049	mg/L		11/22/16 08:30	11/22/16 22:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:45	5
Boron	<0.021		0.050	0.021	mg/L		11/22/16 08:30	11/22/16 22:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 22:45	5
Calcium	<0.13		0.25	0.13	mg/L		11/22/16 08:30	11/22/16 22:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/22/16 08:30	11/22/16 22:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/22/16 08:30	11/22/16 22:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/22/16 08:30	11/22/16 22:45	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/22/16 08:30	11/22/16 22:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/22/16 08:30	11/22/16 22:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/22/16 08:30	11/22/16 22:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/22/16 08:30	11/22/16 22:45	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/28/16 08:43	11/29/16 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		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: 400-130325-1
SDG: LF #4

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

Client Sample ID: GWC-18
Date Collected: 11/16/16 09:39
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-1
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	11/23/16 21:56	KH1	TAL PEN
Total Recoverable	Prep	3005A			331986	11/22/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 22:05	AJR	TAL PEN
Total/NA	Prep	7470A			332715	11/28/16 08:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 12:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: GWC-22
Date Collected: 11/16/16 09:00
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332498	11/23/16 22:19	KH1	TAL PEN
Total Recoverable	Prep	3005A			331986	11/22/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 22:32	AJR	TAL PEN
Total/NA	Prep	7470A			332715	11/28/16 08:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 12:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: GWC-23
Date Collected: 11/16/16 09:05
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-3
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	11/23/16 22:41	KH1	TAL PEN
Total Recoverable	Prep	3005A			331986	11/22/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 22:36	AJR	TAL PEN
Total/NA	Prep	7470A			332715	11/28/16 08:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 12:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: FB-2
Date Collected: 11/16/16 09:20
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332498	11/23/16 23:27	KH1	TAL PEN
Total Recoverable	Prep	3005A			331986	11/22/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 22:41	AJR	TAL PEN
Total/NA	Prep	7470A			332715	11/28/16 08:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 12:57	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: 400-130325-1
SDG: LF #4

Client Sample ID: FERB-2

Lab Sample ID: 400-130325-5

Date Collected: 11/16/16 09:30

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	332498	11/23/16 23:50	KH1	TAL PEN
Total Recoverable	Prep	3005A			331986	11/22/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 22:45	AJR	TAL PEN
Total/NA	Prep	7470A			332715	11/28/16 08:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 12:59	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: 400-130325-1
SDG: LF #4

HPLC/IC

Analysis Batch: 332498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total/NA	Water	300.0	
400-130325-2	GWC-22	Total/NA	Water	300.0	
400-130325-3	GWC-23	Total/NA	Water	300.0	
400-130325-4	FB-2	Total/NA	Water	300.0	
400-130325-5	FERB-2	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	
LCS 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	

Metals

Prep Batch: 331986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total Recoverable	Water	3005A	
400-130325-2	GWC-22	Total Recoverable	Water	3005A	
400-130325-3	GWC-23	Total Recoverable	Water	3005A	
400-130325-4	FB-2	Total Recoverable	Water	3005A	
400-130325-5	FERB-2	Total Recoverable	Water	3005A	
MB 400-331986/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-331986/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-130330-A-4-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-130330-A-4-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 332176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total Recoverable	Water	6020	331986
400-130325-2	GWC-22	Total Recoverable	Water	6020	331986
400-130325-3	GWC-23	Total Recoverable	Water	6020	331986
400-130325-4	FB-2	Total Recoverable	Water	6020	331986
400-130325-5	FERB-2	Total Recoverable	Water	6020	331986
MB 400-331986/1-A ^5	Method Blank	Total Recoverable	Water	6020	331986
LCS 400-331986/2-A	Lab Control Sample	Total Recoverable	Water	6020	331986
400-130330-A-4-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	331986
400-130330-A-4-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	331986

Prep Batch: 332715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total/NA	Water	7470A	
400-130325-2	GWC-22	Total/NA	Water	7470A	
400-130325-3	GWC-23	Total/NA	Water	7470A	
400-130325-4	FB-2	Total/NA	Water	7470A	
400-130325-5	FERB-2	Total/NA	Water	7470A	
MB 400-332715/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-332715/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130502-A-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-130502-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

Metals (Continued)

Analysis Batch: 332993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total/NA	Water	7470A	332715
400-130325-2	GWC-22	Total/NA	Water	7470A	332715
400-130325-3	GWC-23	Total/NA	Water	7470A	332715
400-130325-4	FB-2	Total/NA	Water	7470A	332715
400-130325-5	FERB-2	Total/NA	Water	7470A	332715
MB 400-332715/14-A	Method Blank	Total/NA	Water	7470A	332715
LCS 400-332715/15-A	Lab Control Sample	Total/NA	Water	7470A	332715
400-130502-A-1-B MS	Matrix Spike	Total/NA	Water	7470A	332715
400-130502-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	332715

General Chemistry

Analysis Batch: 332203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total/NA	Water	SM 2540C	
400-130325-2	GWC-22	Total/NA	Water	SM 2540C	
400-130325-3	GWC-23	Total/NA	Water	SM 2540C	
400-130325-4	FB-2	Total/NA	Water	SM 2540C	
400-130325-5	FERB-2	Total/NA	Water	SM 2540C	
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-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

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

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-331986/1-A ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 331986

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/22/16 08:30	11/22/16 20:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/22/16 08:30	11/22/16 20:53	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

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

Lab Sample ID: MB 400-331986/1-A ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 331986

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		11/22/16 08:30	11/22/16 20:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 20:53	5
Boron	<0.021		0.050	0.021	mg/L		11/22/16 08:30	11/22/16 20:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/22/16 08:30	11/22/16 20:53	5
Calcium	<0.13		0.25	0.13	mg/L		11/22/16 08:30	11/22/16 20:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/22/16 08:30	11/22/16 20:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/22/16 08:30	11/22/16 20:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/22/16 08:30	11/22/16 20:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/22/16 08:30	11/22/16 20:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/22/16 08:30	11/22/16 20:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/22/16 08:30	11/22/16 20:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/22/16 08:30	11/22/16 20:53	5

Lab Sample ID: LCS 400-331986/2-A
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 331986

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0520		mg/L		104	80 - 120
Arsenic	0.0500	0.0513		mg/L		103	80 - 120
Barium	0.0500	0.0482		mg/L		96	80 - 120
Beryllium	0.0500	0.0483		mg/L		97	80 - 120
Boron	0.100	0.0991		mg/L		99	80 - 120
Cadmium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	4.89		mg/L		98	80 - 120
Chromium	0.0500	0.0490		mg/L		98	80 - 120
Cobalt	0.0500	0.0501		mg/L		100	80 - 120
Lead	0.0500	0.0498		mg/L		100	80 - 120
Lithium	0.0500	0.0520		mg/L		104	80 - 120
Molybdenum	0.0500	0.0522		mg/L		104	80 - 120
Selenium	0.0500	0.0505		mg/L		101	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-130330-A-4-C MS ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 331986

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0549		mg/L		110	75 - 125
Arsenic	<0.00046		0.0500	0.0520		mg/L		104	75 - 125
Barium	0.084		0.0500	0.132		mg/L		98	75 - 125
Beryllium	<0.00034		0.0500	0.0494		mg/L		99	75 - 125
Boron	<0.021		0.100	0.111		mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125
Calcium	1.8		5.00	6.61		mg/L		97	75 - 125
Chromium	<0.0011		0.0500	0.0497		mg/L		99	75 - 125
Cobalt	0.00073	J	0.0500	0.0511		mg/L		101	75 - 125
Lead	<0.00035		0.0500	0.0484		mg/L		97	75 - 125
Lithium	0.0061		0.0500	0.0594		mg/L		107	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

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

Lab Sample ID: 400-130330-A-4-C MS ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 331986

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	<0.00085		0.0500	0.0513		mg/L		103	75 - 125
Selenium	<0.00024		0.0500	0.0504		mg/L		101	75 - 125
Thallium	<0.00085		0.0100	0.0101		mg/L		101	75 - 125

Lab Sample ID: 400-130330-A-4-D MSD ^5
Matrix: Water
Analysis Batch: 332176

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 331986

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0524		mg/L		105	75 - 125	5	20
Arsenic	<0.00046		0.0500	0.0511		mg/L		102	75 - 125	2	20
Barium	0.084		0.0500	0.129		mg/L		91	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0485		mg/L		97	75 - 125	2	20
Boron	<0.021		0.100	0.107		mg/L		107	75 - 125	4	20
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125	1	20
Calcium	1.8		5.00	6.68		mg/L		98	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0491		mg/L		98	75 - 125	1	20
Cobalt	0.00073	J	0.0500	0.0514		mg/L		101	75 - 125	1	20
Lead	<0.00035		0.0500	0.0489		mg/L		98	75 - 125	1	20
Lithium	0.0061		0.0500	0.0587		mg/L		105	75 - 125	1	20
Molybdenum	<0.00085		0.0500	0.0509		mg/L		102	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0507		mg/L		101	75 - 125	1	20
Thallium	<0.00085		0.0100	0.00996		mg/L		100	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-332715/14-A
Matrix: Water
Analysis Batch: 332993

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 332715

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000844	J	0.00020	0.000070	mg/L		11/28/16 08:31	11/29/16 12:25	1

Lab Sample ID: LCS 400-332715/15-A
Matrix: Water
Analysis Batch: 332993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 332715

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00102		mg/L		101	80 - 120

Lab Sample ID: 400-130502-A-1-B MS
Matrix: Water
Analysis Batch: 332993

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 332715

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00198		mg/L		98	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-130325-1
 SDG: LF #4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-130502-A-1-C MSD
Matrix: Water
Analysis Batch: 332993

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 332715

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00194		mg/L		96	80 - 120	2	20

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

Lab Sample ID: MB 400-332203/1
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-A-3 DU
Matrix: Water
Analysis Batch: 332203

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	270		268		mg/L		0.7	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: Jojo 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: LF4		Sampler: TP ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo Lab P/N: WHITMIRE, CHEYENNE R E-Mail: cheyenne.whitmore@testamericainc.com		Carrier Tracking No(s): Page: 1 of 1 Job #:						
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:		Analysis Requested TDS - SM 2540C : Cl.F,SO4 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - GM-846 9316 & 9320								
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=wastewater, T=tissue, A=air) Preservation Code		Field Filtered Sample (Yes or No) Performance/MSD (Yes or No) Total Number of Containers Special Instructions/Note:								
GWC-18	11/16/16	9:39	G	W	N	1	1	1	3	
GWC-22	11/16/16	9:00	G	W	N	1	1	1	3	
GWC-23	11/16/16	9:05	G	W	N	1	1	1	3	
FB-2	11/16/16	9:20	G	W	N	1	1	1	3	
FERB-2	11/16/16	9:30	G	W	N	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/Note: Special Instructions/Note:										
Empty Kit Relinquished by: Relinquished by: Will King Date/Time: 11/17/16 10:36 Company: ERA										
Relinquished by: Relinquished by: [Signature] Date/Time: 11/16/16 14:50 Company: TA										
Relinquished by: Relinquished by: [Signature] Date/Time: 11/18/16 8:33 Company: TA										
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 IFS										

681-Atlanta



400-130325 COC



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130325-1

SDG Number: LF #4

Login Number: 130325

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	746074
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	5.0°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

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

TestAmerica Job ID: 400-130325-1
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

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: 400-130325-2

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

For:

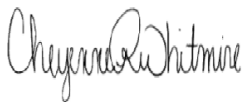
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/30/2016 1:33:48 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Method Summary

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130325-1	GWC-18	Water	11/16/16 09:39	11/18/16 08:33
400-130325-2	GWC-22	Water	11/16/16 09:00	11/18/16 08:33
400-130325-3	GWC-23	Water	11/16/16 09:05	11/18/16 08:33
400-130325-4	FB-2	Water	11/16/16 09:20	11/18/16 08:33
400-130325-5	FERB-2	Water	11/16/16 09:30	11/18/16 08:33

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Client Sample Results

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

TestAmerica Job ID: 400-130325-2
 SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 11/16/16 09:39

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-1

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	0.267	U	0.248	0.250	1.00	0.380	pCi/L	11/28/16 10:07	12/29/16 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					11/28/16 10:07	12/29/16 06:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.452	U	0.299	0.302	1.00	0.459	pCi/L	11/28/16 15:20	12/28/16 18:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					11/28/16 15:20	12/28/16 18:18	1
Y Carrier	88.6		40 - 110					11/28/16 15:20	12/28/16 18:18	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.719		0.389	0.392	5.00	0.459	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130325-2
 SDG: LF #4

Client Sample ID: GWC-22
Date Collected: 11/16/16 09:00
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-2
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	0.754		0.351	0.358	1.00	0.404	pCi/L	11/28/16 10:07	12/29/16 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.5		40 - 110					11/28/16 10:07	12/29/16 06:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.487	U	0.493	0.495	1.00	0.806	pCi/L	11/28/16 15:20	12/28/16 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.5		40 - 110					11/28/16 15:20	12/28/16 18:19	1
Y Carrier	86.0		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	1.24		0.605	0.611	5.00	0.806	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130325-2
 SDG: LF #4

Client Sample ID: GWC-23

Lab Sample ID: 400-130325-3

Date Collected: 11/16/16 09:05

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	0.264	U	0.252	0.253	1.00	0.394	pCi/L	11/28/16 10:07	12/29/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		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	0.193	U	0.250	0.251	1.00	0.416	pCi/L	11/28/16 15:20	12/28/16 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					11/28/16 15:20	12/28/16 18:19	1
Y Carrier	85.6		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	0.456		0.355	0.356	5.00	0.416	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Client Sample ID: FB-2
Date Collected: 11/16/16 09:20
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-4
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	-0.0488	U	0.163	0.163	1.00	0.370	pCi/L	11/28/16 10:07	12/29/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		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	0.173	U	0.271	0.271	1.00	0.456	pCi/L	11/28/16 15:20	12/28/16 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110					11/28/16 15:20	12/28/16 18:19	1
Y Carrier	88.2		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	0.125	U	0.316	0.317	5.00	0.456	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130325-2
 SDG: LF #4

Client Sample ID: FERB-2

Lab Sample ID: 400-130325-5

Date Collected: 11/16/16 09:30

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	-0.0234	U	0.173	0.173	1.00	0.375	pCi/L	11/28/16 10:07	12/29/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		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	0.0909	U	0.268	0.268	1.00	0.465	pCi/L	11/28/16 15:20	12/28/16 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					11/28/16 15:20	12/28/16 18:19	1
Y Carrier	88.2		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	0.0675	U	0.319	0.319	5.00	0.465	pCi/L		12/29/16 18:35	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Client Sample ID: GWC-18

Date Collected: 11/16/16 09:39

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-1

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 06:58	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 18:18	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: GWC-22

Date Collected: 11/16/16 09:00

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-2

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 06:58	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 18:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: GWC-23

Date Collected: 11/16/16 09:05

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-3

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 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: FB-2

Date Collected: 11/16/16 09:20

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130325-4

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 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

Lab Chronicle

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Client Sample ID: FERB-2

Lab Sample ID: 400-130325-5

Date Collected: 11/16/16 09:30

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 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

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: 400-130325-2
SDG: LF #4

Rad

Prep Batch: 281185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total/NA	Water	PrecSep-21	
400-130325-2	GWC-22	Total/NA	Water	PrecSep-21	
400-130325-3	GWC-23	Total/NA	Water	PrecSep-21	
400-130325-4	FB-2	Total/NA	Water	PrecSep-21	
400-130325-5	FERB-2	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-A-10-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 281250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130325-1	GWC-18	Total/NA	Water	PrecSep_0	
400-130325-2	GWC-22	Total/NA	Water	PrecSep_0	
400-130325-3	GWC-23	Total/NA	Water	PrecSep_0	
400-130325-4	FB-2	Total/NA	Water	PrecSep_0	
400-130325-5	FERB-2	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-A-10-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

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-A-10-A DU
Matrix: Water
Analysis Batch: 285758

Client Sample ID: Duplicate
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: 400-130325-2
 SDG: LF #4

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-A-10-B DU
Matrix: Water
Analysis Batch: 285700

Client Sample ID: Duplicate
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-A-10 DU
Matrix: Water
Analysis Batch: 285852

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	0.694		0.1053	U	0.334	5.00	0.483	pCi/L	0.80	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130325-2

SDG Number: LF #4

Login Number: 130325

List Number: 1

Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	746074
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	5.0°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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.

TestAmerica Pensacola

Certification Summary

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

TestAmerica Job ID: 400-130325-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

* Certification renewal pending - certification considered valid.

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: 400-132478-1

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/10/2017 6:37:30 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Job ID: 400-132478-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-132478-1

Metals

Method(s) 6020: The method blank for preparation batch 338540 and analytical batch 339013 contained Zinc above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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Detection Summary

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Client Sample ID: GWA-2

Lab Sample ID: 400-132478-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.83	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.62		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0014	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0084	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3

Lab Sample ID: 400-132478-2

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
Sulfate	1.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.73		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Vanadium	0.0015	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0079	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4R

Lab Sample ID: 400-132478-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	4.7		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0014	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-132478-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.0		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: 400-132478-1
 SDG: LF #4

Client Sample ID: DUP-1 (Continued)

Lab Sample ID: 400-132478-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.74		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Vanadium	0.0016	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0082	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

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Method Summary

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

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: 400-132478-1
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132478-1	GWA-2	Water	01/10/17 13:23	01/11/17 10:50
400-132478-2	GWA-3	Water	01/10/17 10:45	01/11/17 10:50
400-132478-3	GWA-4R	Water	01/10/17 15:48	01/11/17 10:50
400-132478-4	DUP-1	Water	01/10/17 00:00	01/11/17 10:50

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Client Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 01/10/17 13:23
Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.9		1.0	0.89	mg/L			01/16/17 20:26	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 20:26	1
Sulfate	0.83	J	1.0	0.70	mg/L			01/16/17 20:26	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		01/16/17 11:50	01/18/17 16:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 16:57	5
Barium	0.031		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 16:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 16:57	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 16:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 16:57	5
Calcium	0.62		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 16:57	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 16:57	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 16:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 16:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 16:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 16:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 16:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 16:57	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 16:57	5
Vanadium	0.0014	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 16:57	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 16:57	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 16:57	5
Zinc	0.0084	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 16:57	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/17 15:08	01/17/17 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 01/10/17 10:45
Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-2
Matrix: Water

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			01/16/17 20:49	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 20:49	1
Sulfate	1.2		1.0	0.70	mg/L			01/16/17 20:49	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		01/16/17 11:50	01/18/17 17:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:02	5
Barium	0.015		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:02	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:02	5
Calcium	0.73		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:02	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:02	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:02	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:02	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:02	5
Vanadium	0.0015	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:02	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:02	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:02	5
Zinc	0.0079	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/17 15:08	01/17/17 12:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Client Sample ID: GWA-4R

Lab Sample ID: 400-132478-3

Date Collected: 01/10/17 15:48

Matrix: Water

Date Received: 01/11/17 10:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			01/16/17 21:11	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 21:11	1
Sulfate	4.7		1.0	0.70	mg/L			01/16/17 21:11	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		01/16/17 11:50	01/18/17 17:06	5
Arsenic	0.0021		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:06	5
Barium	0.021		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:06	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:06	5
Calcium	1.5		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:06	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:06	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:06	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:06	5
Vanadium	0.0014	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:06	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:06	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:06	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/17 15:08	01/17/17 12:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 01/10/17 00:00
Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.0		1.0	0.89	mg/L			01/16/17 21:34	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 21:34	1
Sulfate	1.7		1.0	0.70	mg/L			01/16/17 21:34	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		01/16/17 11:50	01/18/17 17:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:11	5
Barium	0.015		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:11	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:11	5
Calcium	0.74		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:11	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:11	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:11	5
Vanadium	0.0016	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:11	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:11	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:11	5
Zinc	0.0082	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 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		01/16/17 15:08	01/17/17 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			01/15/17 14:05	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

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.
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: 400-132478-1
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 01/10/17 13:23

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 20:26	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 16:57	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 12:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: GWA-3

Date Collected: 01/10/17 10:45

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 20:49	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:02	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 12:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: GWA-4R

Date Collected: 01/10/17 15:48

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 21:11	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:06	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 12:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: DUP-1

Date Collected: 01/10/17 00:00

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 21:34	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:11	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 12:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

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: 400-132478-1
SDG: LF #4

HPLC/IC

Analysis Batch: 338580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total/NA	Water	300.0	
400-132478-2	GWA-3	Total/NA	Water	300.0	
400-132478-3	GWA-4R	Total/NA	Water	300.0	
400-132478-4	DUP-1	Total/NA	Water	300.0	
MB 400-338580/4	Method Blank	Total/NA	Water	300.0	
LCS 400-338580/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-338580/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132513-M-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-132513-M-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 338540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total Recoverable	Water	3005A	
400-132478-2	GWA-3	Total Recoverable	Water	3005A	
400-132478-3	GWA-4R	Total Recoverable	Water	3005A	
400-132478-4	DUP-1	Total Recoverable	Water	3005A	
MB 400-338540/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-338540/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132595-D-4-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-132595-D-4-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 338641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total/NA	Water	7470A	
400-132478-2	GWA-3	Total/NA	Water	7470A	
400-132478-3	GWA-4R	Total/NA	Water	7470A	
400-132478-4	DUP-1	Total/NA	Water	7470A	
MB 400-338641/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-338641/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132478-1 MS	GWA-2	Total/NA	Water	7470A	
400-132478-1 MSD	GWA-2	Total/NA	Water	7470A	

Analysis Batch: 338774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total/NA	Water	7470A	338641
400-132478-2	GWA-3	Total/NA	Water	7470A	338641
400-132478-3	GWA-4R	Total/NA	Water	7470A	338641
400-132478-4	DUP-1	Total/NA	Water	7470A	338641
MB 400-338641/14-A	Method Blank	Total/NA	Water	7470A	338641
LCS 400-338641/15-A	Lab Control Sample	Total/NA	Water	7470A	338641
400-132478-1 MS	GWA-2	Total/NA	Water	7470A	338641
400-132478-1 MSD	GWA-2	Total/NA	Water	7470A	338641

Analysis Batch: 339013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total Recoverable	Water	6020	338540
400-132478-2	GWA-3	Total Recoverable	Water	6020	338540
400-132478-3	GWA-4R	Total Recoverable	Water	6020	338540

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Metals (Continued)

Analysis Batch: 339013 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-4	DUP-1	Total Recoverable	Water	6020	338540
MB 400-338540/1-A ^5	Method Blank	Total Recoverable	Water	6020	338540
LCS 400-338540/2-A	Lab Control Sample	Total Recoverable	Water	6020	338540
400-132595-D-4-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	338540
400-132595-D-4-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	338540

General Chemistry

Analysis Batch: 338524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total/NA	Water	SM 2540C	
400-132478-2	GWA-3	Total/NA	Water	SM 2540C	
400-132478-3	GWA-4R	Total/NA	Water	SM 2540C	
400-132478-4	DUP-1	Total/NA	Water	SM 2540C	
MB 400-338524/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-338524/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132478-1 DU	GWA-2	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-338580/4
Matrix: Water
Analysis Batch: 338580

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			01/16/17 10:33	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 10:33	1
Sulfate	<0.70		1.0	0.70	mg/L			01/16/17 10:33	1

Lab Sample ID: LCS 400-338580/5
Matrix: Water
Analysis Batch: 338580

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	10.7		mg/L		107	90 - 110
Fluoride	10.0	9.66		mg/L		97	90 - 110
Sulfate	10.0	10.5		mg/L		105	90 - 110

Lab Sample ID: LCSD 400-338580/6
Matrix: Water
Analysis Batch: 338580

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	2	15
Fluoride	10.0	10.8		mg/L		108	90 - 110	11	15
Sulfate	10.0	10.7		mg/L		107	90 - 110	1	15

Lab Sample ID: 400-132513-M-4 MS
Matrix: Water
Analysis Batch: 338580

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<89		1000	1090		mg/L		109	80 - 120
Fluoride	<8.2		1000	1010		mg/L		101	80 - 120
Sulfate	<70		1000	1090		mg/L		109	80 - 120

Lab Sample ID: 400-132513-M-4 MSD
Matrix: Water
Analysis Batch: 338580

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<89		1000	1070		mg/L		107	80 - 120	2	20
Fluoride	<8.2		1000	1120		mg/L		112	80 - 120	10	20
Sulfate	<70		1000	1090		mg/L		109	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-338540/1-A ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/17 11:50	01/18/17 15:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 15:36	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

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

Lab Sample ID: MB 400-338540/1-A ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 15:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 15:36	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 15:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 15:36	5
Calcium	<0.13		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 15:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 15:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 15:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 15:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 15:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 15:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 15:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 15:36	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 15:36	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 15:36	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 15:36	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 15:36	5
Zinc	0.0174	J	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 15:36	5

Lab Sample ID: LCS 400-338540/2-A
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0515		mg/L		103	80 - 120
Arsenic	0.0500	0.0521		mg/L		104	80 - 120
Barium	0.0500	0.0484		mg/L		97	80 - 120
Beryllium	0.0500	0.0511		mg/L		102	80 - 120
Boron	0.100	0.0978		mg/L		98	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Calcium	5.00	4.75		mg/L		95	80 - 120
Chromium	0.0500	0.0517		mg/L		103	80 - 120
Cobalt	0.0500	0.0496		mg/L		99	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Lithium	0.0500	0.0516		mg/L		103	80 - 120
Molybdenum	0.100	0.100		mg/L		100	80 - 120
Selenium	0.0500	0.0505		mg/L		101	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120
Nickel	0.0500	0.0520		mg/L		104	80 - 120
Vanadium	0.0500	0.0512		mg/L		102	80 - 120
Silver	0.0500	0.0475		mg/L		95	80 - 120
Copper	0.0500	0.0523		mg/L		105	80 - 120
Zinc	0.0500	0.0515		mg/L		103	80 - 120

Lab Sample ID: 400-132595-D-4-B MS ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0530		mg/L		106	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

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

Lab Sample ID: 400-132595-D-4-B MS ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0028		0.0500	0.0542		mg/L		103	75 - 125
Barium	0.047		0.0500	0.0972		mg/L		100	75 - 125
Beryllium	<0.00034		0.0500	0.0510		mg/L		102	75 - 125
Boron	<0.021		0.100	0.116		mg/L		116	75 - 125
Cadmium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125
Calcium	0.34		5.00	5.11		mg/L		95	75 - 125
Chromium	<0.0011		0.0500	0.0523		mg/L		105	75 - 125
Cobalt	0.0034		0.0500	0.0530		mg/L		99	75 - 125
Lead	0.00054	J	0.0500	0.0509		mg/L		101	75 - 125
Lithium	<0.0032		0.0500	0.0542		mg/L		108	75 - 125
Molybdenum	<0.00085		0.100	0.0995		mg/L		99	75 - 125
Selenium	<0.00024		0.0500	0.0507		mg/L		101	75 - 125
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125
Nickel	0.0020	J	0.0500	0.0532		mg/L		103	75 - 125
Vanadium	0.014		0.0500	0.0642		mg/L		100	75 - 125
Silver	<0.00011		0.0500	0.0478		mg/L		96	75 - 125
Copper	<0.0021		0.0500	0.0542		mg/L		108	75 - 125
Zinc	<0.0065		0.0500	0.0606		mg/L		121	75 - 125

Lab Sample ID: 400-132595-D-4-C MSD ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0520		mg/L		104	75 - 125	2	20
Arsenic	0.0028		0.0500	0.0553		mg/L		105	75 - 125	2	20
Barium	0.047		0.0500	0.0957		mg/L		97	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125	1	20
Boron	<0.021		0.100	0.109		mg/L		109	75 - 125	6	20
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125	1	20
Calcium	0.34		5.00	5.02		mg/L		94	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0533		mg/L		107	75 - 125	2	20
Cobalt	0.0034		0.0500	0.0538		mg/L		101	75 - 125	1	20
Lead	0.00054	J	0.0500	0.0506		mg/L		100	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0551		mg/L		110	75 - 125	2	20
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0502		mg/L		100	75 - 125	1	20
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125	0	20
Nickel	0.0020	J	0.0500	0.0548		mg/L		106	75 - 125	3	20
Vanadium	0.014		0.0500	0.0652		mg/L		102	75 - 125	2	20
Silver	<0.00011		0.0500	0.0477		mg/L		95	75 - 125	0	20
Copper	<0.0021		0.0500	0.0536		mg/L		107	75 - 125	1	20
Zinc	<0.0065		0.0500	0.0604		mg/L		121	75 - 125	0	20

QC Sample Results

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

TestAmerica Job ID: 400-132478-1
SDG: LF #4

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-338641/14-A
Matrix: Water
Analysis Batch: 338774

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/17 15:03	01/17/17 12:35	1

Lab Sample ID: LCS 400-338641/15-A
Matrix: Water
Analysis Batch: 338774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338641

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00106		mg/L		105	80 - 120

Lab Sample ID: 400-132478-1 MS
Matrix: Water
Analysis Batch: 338774

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 338641

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00220		mg/L		109	80 - 120

Lab Sample ID: 400-132478-1 MSD
Matrix: Water
Analysis Batch: 338774

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 338641

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00215		mg/L		107	80 - 120	2	20

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

Lab Sample ID: MB 400-338524/1
Matrix: Water
Analysis Batch: 338524

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			01/15/17 14:05	1

Lab Sample ID: LCS 400-338524/2
Matrix: Water
Analysis Batch: 338524

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	242		mg/L		83	78 - 122

Lab Sample ID: 400-132478-1 DU
Matrix: Water
Analysis Batch: 338524

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	18		18.0		mg/L		0	5

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132478-1

SDG Number: LF #4

Login Number: 132478

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	1.6 & 1.6°C, IR-2
Cooler Temperature is recorded.	True	
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: 400-132478-1
 SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132478-2

TestAmerica Sample Delivery Group: LF #4

Client Project/Site: CCR - Plant McIntosh

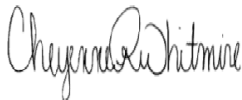
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/10/2017 6:38:28 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: 400-132478-2
SDG: LF #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-132478-2
SDG: LF #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132478-1	GWA-2	Water	01/10/17 13:23	01/11/17 10:50
400-132478-2	GWA-3	Water	01/10/17 10:45	01/11/17 10:50
400-132478-3	GWA-4R	Water	01/10/17 15:48	01/11/17 10:50
400-132478-4	DUP-1	Water	01/10/17 00:00	01/11/17 10:50

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Client Sample Results

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

TestAmerica Job ID: 400-132478-2
 SDG: LF #4

Client Sample ID: GWA-2
Date Collected: 01/10/17 13:23
Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-1
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	0.617		0.180	0.189	1.00	0.168	pCi/L	01/17/17 12:52	02/08/17 07:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					01/17/17 12:52	02/08/17 07:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.267	U	0.251	0.252	1.00	0.404	pCi/L	01/17/17 13:21	02/03/17 17:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					01/17/17 13:21	02/03/17 17:23	1
Y Carrier	84.1		40 - 110					01/17/17 13:21	02/03/17 17:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.883		0.309	0.315	5.00	0.404	pCi/L		02/09/17 10:03	1

Client Sample Results

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

TestAmerica Job ID: 400-132478-2
 SDG: LF #4

Client Sample ID: GWA-3
Date Collected: 01/10/17 10:45
Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-2
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	0.433		0.170	0.174	1.00	0.193	pCi/L	01/17/17 12:52	02/08/17 07:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					01/17/17 12:52	02/08/17 07:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.331	U	0.262	0.264	1.00	0.413	pCi/L	01/17/17 13:21	02/03/17 17:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					01/17/17 13:21	02/03/17 17:23	1
Y Carrier	84.9		40 - 110					01/17/17 13:21	02/03/17 17:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.764		0.313	0.316	5.00	0.413	pCi/L		02/09/17 10:03	1

Client Sample Results

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

TestAmerica Job ID: 400-132478-2
 SDG: LF #4

Client Sample ID: GWA-4R

Lab Sample ID: 400-132478-3

Date Collected: 01/10/17 15:48

Matrix: Water

Date Received: 01/11/17 10:50

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152	U	0.117	0.117	1.00	0.167	pCi/L	01/17/17 12:52	02/08/17 07:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		40 - 110					01/17/17 12:52	02/08/17 07:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0517	U	0.269	0.269	1.00	0.475	pCi/L	01/17/17 13:21	02/03/17 17:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		40 - 110					01/17/17 13:21	02/03/17 17:24	1
Y Carrier	84.1		40 - 110					01/17/17 13:21	02/03/17 17:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.204	U	0.293	0.293	5.00	0.475	pCi/L		02/09/17 10:03	1

Client Sample Results

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

TestAmerica Job ID: 400-132478-2
 SDG: LF #4

Client Sample ID: DUP-1
Date Collected: 01/10/17 00:00
Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-4
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	0.551		0.177	0.184	1.00	0.164	pCi/L	01/17/17 12:52	02/08/17 07:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					01/17/17 12:52	02/08/17 07:06	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.304	U	0.260	0.261	1.00	0.413	pCi/L	01/17/17 13:21	02/03/17 17:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					01/17/17 13:21	02/03/17 17:24	1
Y Carrier	88.6		40 - 110					01/17/17 13:21	02/03/17 17:24	1

Method: Ra226_Ra228 - Combined Radium-226 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		0.314	0.319	5.00	0.413	pCi/L		02/09/17 10:03	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132478-2
SDG: LF #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-132478-2
SDG: LF #4

Client Sample ID: GWA-2

Date Collected: 01/10/17 13:23

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			287992	01/17/17 12:52	AS	TAL SL
Total/NA	Analysis	9315		1	291521	02/08/17 07:05	ALD	TAL SL
Total/NA	Prep	PrecSep_0			287997	01/17/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	290910	02/03/17 17:23	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	291720	02/09/17 10:03	RTM	TAL SL

Client Sample ID: GWA-3

Date Collected: 01/10/17 10:45

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			287992	01/17/17 12:52	AS	TAL SL
Total/NA	Analysis	9315		1	291521	02/08/17 07:06	ALD	TAL SL
Total/NA	Prep	PrecSep_0			287997	01/17/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	290910	02/03/17 17:23	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	291720	02/09/17 10:03	RTM	TAL SL

Client Sample ID: GWA-4R

Date Collected: 01/10/17 15:48

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			287992	01/17/17 12:52	AS	TAL SL
Total/NA	Analysis	9315		1	291521	02/08/17 07:06	ALD	TAL SL
Total/NA	Prep	PrecSep_0			287997	01/17/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	290910	02/03/17 17:24	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	291720	02/09/17 10:03	RTM	TAL SL

Client Sample ID: DUP-1

Date Collected: 01/10/17 00:00

Date Received: 01/11/17 10:50

Lab Sample ID: 400-132478-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			287992	01/17/17 12:52	AS	TAL SL
Total/NA	Analysis	9315		1	291521	02/08/17 07:06	ALD	TAL SL
Total/NA	Prep	PrecSep_0			287997	01/17/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	290910	02/03/17 17:24	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	291720	02/09/17 10:03	RTM	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-132478-2
SDG: LF #4

Rad

Prep Batch: 287992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total/NA	Water	PrecSep-21	
400-132478-2	GWA-3	Total/NA	Water	PrecSep-21	
400-132478-3	GWA-4R	Total/NA	Water	PrecSep-21	
400-132478-4	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-287992/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-287992/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-132436-A-5-D DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 287997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-1	GWA-2	Total/NA	Water	PrecSep_0	
400-132478-2	GWA-3	Total/NA	Water	PrecSep_0	
400-132478-3	GWA-4R	Total/NA	Water	PrecSep_0	
400-132478-4	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-287997/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-287997/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-132436-A-5-F DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-132478-2
SDG: LF #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-287992/1-A
Matrix: Water
Analysis Batch: 291519

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287992

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06909	U	0.109	0.109	1.00	0.189	pCi/L	01/17/17 12:52	02/08/17 07:02	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					01/17/17 12:52	02/08/17 07:02	1

Lab Sample ID: LCS 160-287992/2-A
Matrix: Water
Analysis Batch: 291519

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287992

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	7.681		0.932	1.00	0.208	pCi/L	128	68 - 137
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	74.1		40 - 110						

Lab Sample ID: 400-132436-A-5-D DU
Matrix: Water
Analysis Batch: 291519

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 287992

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.391		0.4643		0.183	1.00	0.192	pCi/L	0.21	1
Carrier	%Yield	DU Qualifier	Limits							
Ba Carrier	74.1		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-287997/1-A
Matrix: Water
Analysis Batch: 290910

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287997

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08400	U	0.322	0.322	1.00	0.562	pCi/L	01/17/17 13:21	02/03/17 17:22	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.5		40 - 110					01/17/17 13:21	02/03/17 17:22	1
Y Carrier	83.0		40 - 110					01/17/17 13:21	02/03/17 17:22	1

QC Sample Results

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

TestAmerica Job ID: 400-132478-2
 SDG: LF #4

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

Lab Sample ID: LCS 160-287997/2-A
Matrix: Water
Analysis Batch: 290910

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287997

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.9	15.54		1.73	1.00	0.484	pCi/L	112	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	74.1		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: 400-132436-A-5-F DU
Matrix: Water
Analysis Batch: 290910

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 287997

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.719		0.7519		0.352	1.00	0.497	pCi/L	0.04	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	74.1		40 - 110
Y Carrier	84.1		40 - 110

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

Lab Sample ID: 400-132436-A-5 DU
Matrix: Water
Analysis Batch: 291720

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	1.11		1.216		0.397	5.00	0.497	pCi/L	0.13	

TestAmerica Pensacola
 3355 Molenvore Drive
 Pensacola, FL 32614
 Phone (850) 474-1001 Fax (850) 478-2871

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Chain of Custody Record

Client Information
 Street Address: 341 Ralph McGill Blvd SE B10185
 City: Atlanta
 State: GA 30308
 Phone: 404-506-7239
 Email: Labraham@southernco.com
 Project Name: MCCLELLAN AIR TOBER
 Site: Plant Yacone - Landfill #4
 CCR + State Permit

Sample Information
 Sample ID: T. Perna 2nd; G. Handle 2nd; G. Ink G.J.
 Date Requested: 1/10/17
 Lab #/ID: WHI11111, Cheyenne R
 Lab Name: Whilmine, Cheyenne R
 Email: cheyenne.whilmine@testamerica.com

Analysis Requested	META (Part 217 Appendix II & IV) EPA 8150 & EPA 7470	MEDIA (Part 228 & 229 - SW-846 915 & 920)	META (EPA 8209 State Permit)	CA, HI, SD, NY, VA, ZN
TDS - SM 2540C ; CF, S04 - EPA 200	X	X	X	X

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (N=None, G=Grab, L=Liquor, S=Slurry, A=Aspirate)	Preservation Codes	Special Instructions/Notes
GWA-2	1/10/17	15:23	G	GW	A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - NaOH G - Ammonia H - Acetic Acid I - Ice J - Di Winter K - EDTA L - EDA Other:	
GWA-3	1/10/17	10:45	G	GW	M - Hexane N - None O - AHNH03 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Duplicate U - Aqueous V - MCAA W - pH 4.5 Z - other (specify)	
GWA-4R	1/10/17	15:48	G	GW		
DUP-1	1/10/17	-	G	GW		

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: Method of Shipment: _____

Received By: V. Secorson Date/Time: 1/11/2017 10:50 Company: ERM
 Received By: Date/Time: Company:
 Received By: Date/Time: Company:

Custody Seal No.: 16/16
 A: Yes B: No

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132478-2

SDG Number: LF #4

Login Number: 132478

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	1.6 & 1.6°C, IR-2
Cooler Temperature is recorded.	True	
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: 400-132478-2
SDG: LF #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132478-2
SDG: LF #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	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

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-132523-1

TestAmerica Sample Delivery Group: Landfill #4

Client Project/Site: CCR - Plant McIntosh

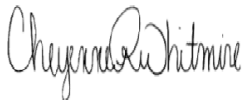
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/22/2017 11:02:45 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Detection Summary

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-16

Lab Sample ID: 400-132523-1

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
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0015	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	0.36		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

Client Sample ID: GWA-5

Lab Sample ID: 400-132523-2

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
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0016	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.013	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	2.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-15

Lab Sample ID: 400-132523-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0017	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.014	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	0.34		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00046	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	8.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-14

Lab Sample ID: 400-132523-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Zinc	0.013	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	0.47		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: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-14 (Continued)

Lab Sample ID: 400-132523-4

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

Client Sample ID: GWC-17

Lab Sample ID: 400-132523-5

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	0.16	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Nickel	0.0020	J	0.0025	0.0018	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00066	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Zinc	0.018	J B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Cadmium	0.00070	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0025		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00062	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-18

Lab Sample ID: 400-132523-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.51		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.2		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00093	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0030		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.025	B	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	15		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0025		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Thallium	0.000095	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

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: 400-132523-1
SDG: Landfill #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132523-1	GWA-16	Water	01/11/17 14:45	01/12/17 08:55
400-132523-2	GWA-5	Water	01/11/17 09:55	01/12/17 08:55
400-132523-3	GWA-15	Water	01/11/17 12:55	01/12/17 08:55
400-132523-4	GWA-14	Water	01/11/17 11:25	01/12/17 08:55
400-132523-5	GWC-17	Water	01/11/17 16:20	01/12/17 08:55
400-132523-6	GWC-18	Water	01/11/17 17:15	01/12/17 08:55

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

Client Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-16

Date Collected: 01/11/17 14:45

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-1

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			01/16/17 17:01	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 17:01	1
Sulfate	<0.70		1.0	0.70	mg/L			01/16/17 17:01	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		01/16/17 11:50	01/18/17 17:15	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:15	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:15	5
Barium	0.021		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:15	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:15	5
Vanadium	0.0015	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:15	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:15	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:15	5
Calcium	0.36		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:15	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:15	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:15	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		01/16/17 15:08	01/17/17 13:00	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			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-5
Date Collected: 01/11/17 09:55
Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-2
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			01/16/17 17:46	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 17:46	1
Sulfate	<0.70		1.0	0.70	mg/L			01/16/17 17:46	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		01/16/17 11:50	01/18/17 17:20	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:20	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:20	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:20	5
Barium	0.037		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:20	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:20	5
Vanadium	0.0016	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:20	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:20	5
Zinc	0.013	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:20	5
Calcium	2.5		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:20	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:20	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:20	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:20	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		01/16/17 15:08	01/17/17 13:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-15

Date Collected: 01/11/17 12:55

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.8		1.0	0.89	mg/L			01/16/17 18:09	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 18:09	1
Sulfate	<0.70		1.0	0.70	mg/L			01/16/17 18:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/17 11:50	01/18/17 17:24	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:24	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:24	5
Barium	0.022		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:24	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:24	5
Vanadium	0.0017	J	0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:24	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:24	5
Zinc	0.014	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:24	5
Calcium	0.34		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:24	5
Cobalt	0.00046	J	0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:24	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		01/16/17 15:08	01/17/17 13:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8.0		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-14
Date Collected: 01/11/17 11:25
Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		1.0	0.89	mg/L			01/16/17 18:32	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 18:32	1
Sulfate	1.4		1.0	0.70	mg/L			01/16/17 18:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/17 11:50	01/18/17 17:52	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:52	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:52	5
Barium	0.011		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:52	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:52	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:52	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:52	5
Zinc	0.013	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:52	5
Calcium	0.47		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/17 15:08	01/17/17 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWC-17

Date Collected: 01/11/17 16:20

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-5

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			01/16/17 19:40	1
Fluoride	0.16	J	0.20	0.082	mg/L			01/16/17 19:40	1
Sulfate	1.1		1.0	0.70	mg/L			01/16/17 19:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/17 11:50	01/18/17 17:56	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 17:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 17:56	5
Nickel	0.0020	J	0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 17:56	5
Barium	0.017		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 17:56	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 17:56	5
Beryllium	0.00066	J	0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:56	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 17:56	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 17:56	5
Zinc	0.018	J B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 17:56	5
Cadmium	0.00070	J	0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 17:56	5
Calcium	2.0		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 17:56	5
Chromium	0.0025		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 17:56	5
Cobalt	0.00062	J	0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 17:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 17:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 17:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 17:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 17:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 17:56	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		01/16/17 15:08	01/17/17 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			01/15/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-1
 SDG: Landfill #4

Client Sample ID: GWC-18

Lab Sample ID: 400-132523-6

Date Collected: 01/11/17 17:15

Matrix: Water

Date Received: 01/12/17 08:55

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0		1.0	0.89	mg/L			01/16/17 20:03	1
Fluoride	0.51		0.20	0.082	mg/L			01/16/17 20:03	1
Sulfate	5.2		1.0	0.70	mg/L			01/16/17 20:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/17 11:50	01/18/17 18:01	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 18:01	5
Arsenic	0.00093	J	0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 18:01	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 18:01	5
Barium	0.017		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 18:01	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 18:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 18:01	5
Vanadium	0.0030		0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 18:01	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 18:01	5
Zinc	0.025	B	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 18:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 18:01	5
Calcium	15		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 18:01	5
Chromium	0.0025		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 18:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 18:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 18:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 18:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 18:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 18:01	5
Thallium	0.000095	J	0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 18:01	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		01/16/17 15:08	01/17/17 13:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			01/15/17 14:05	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

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.
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: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWA-16

Date Collected: 01/11/17 14:45

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 17:01	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:15	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 13:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: GWA-5

Date Collected: 01/11/17 09:55

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 17:46	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:20	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 13:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: GWA-15

Date Collected: 01/11/17 12:55

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 18:09	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:24	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 13:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: GWA-14

Date Collected: 01/11/17 11:25

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 18:32	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:52	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 13:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Client Sample ID: GWC-17

Date Collected: 01/11/17 16:20

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 19:40	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 17:56	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	RRC	TAL PEN

Client Sample ID: GWC-18

Date Collected: 01/11/17 17:15

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338580	01/16/17 20:03	KH1	TAL PEN
Total Recoverable	Prep	3005A			338540	01/16/17 11:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339013	01/18/17 18:01	DRE	TAL PEN
Total/NA	Prep	7470A			338641	01/16/17 15:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	338774	01/17/17 13:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338524	01/15/17 14:05	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: 400-132523-1
SDG: Landfill #4

HPLC/IC

Analysis Batch: 338580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total/NA	Water	300.0	
400-132523-2	GWA-5	Total/NA	Water	300.0	
400-132523-3	GWA-15	Total/NA	Water	300.0	
400-132523-4	GWA-14	Total/NA	Water	300.0	
400-132523-5	GWC-17	Total/NA	Water	300.0	
400-132523-6	GWC-18	Total/NA	Water	300.0	
MB 400-338580/4	Method Blank	Total/NA	Water	300.0	
LCS 400-338580/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-338580/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132513-M-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-132513-M-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 338540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total Recoverable	Water	3005A	
400-132523-2	GWA-5	Total Recoverable	Water	3005A	
400-132523-3	GWA-15	Total Recoverable	Water	3005A	
400-132523-4	GWA-14	Total Recoverable	Water	3005A	
400-132523-5	GWC-17	Total Recoverable	Water	3005A	
400-132523-6	GWC-18	Total Recoverable	Water	3005A	
MB 400-338540/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-338540/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132595-D-4-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-132595-D-4-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 338641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total/NA	Water	7470A	
400-132523-2	GWA-5	Total/NA	Water	7470A	
400-132523-3	GWA-15	Total/NA	Water	7470A	
400-132523-4	GWA-14	Total/NA	Water	7470A	
400-132523-5	GWC-17	Total/NA	Water	7470A	
400-132523-6	GWC-18	Total/NA	Water	7470A	
MB 400-338641/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-338641/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132478-C-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-132478-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 338774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total/NA	Water	7470A	338641
400-132523-2	GWA-5	Total/NA	Water	7470A	338641
400-132523-3	GWA-15	Total/NA	Water	7470A	338641
400-132523-4	GWA-14	Total/NA	Water	7470A	338641
400-132523-5	GWC-17	Total/NA	Water	7470A	338641
400-132523-6	GWC-18	Total/NA	Water	7470A	338641
MB 400-338641/14-A	Method Blank	Total/NA	Water	7470A	338641
LCS 400-338641/15-A	Lab Control Sample	Total/NA	Water	7470A	338641

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Metals (Continued)

Analysis Batch: 338774 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132478-C-1-C MS	Matrix Spike	Total/NA	Water	7470A	338641
400-132478-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	338641

Analysis Batch: 339013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total Recoverable	Water	6020	338540
400-132523-2	GWA-5	Total Recoverable	Water	6020	338540
400-132523-3	GWA-15	Total Recoverable	Water	6020	338540
400-132523-4	GWA-14	Total Recoverable	Water	6020	338540
400-132523-5	GWC-17	Total Recoverable	Water	6020	338540
400-132523-6	GWC-18	Total Recoverable	Water	6020	338540
MB 400-338540/1-A ^5	Method Blank	Total Recoverable	Water	6020	338540
LCS 400-338540/2-A	Lab Control Sample	Total Recoverable	Water	6020	338540
400-132595-D-4-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	338540
400-132595-D-4-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	338540

General Chemistry

Analysis Batch: 338524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total/NA	Water	SM 2540C	
400-132523-2	GWA-5	Total/NA	Water	SM 2540C	
400-132523-3	GWA-15	Total/NA	Water	SM 2540C	
400-132523-4	GWA-14	Total/NA	Water	SM 2540C	
400-132523-5	GWC-17	Total/NA	Water	SM 2540C	
400-132523-6	GWC-18	Total/NA	Water	SM 2540C	
MB 400-338524/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-338524/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132478-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-338580/4
Matrix: Water
Analysis Batch: 338580

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			01/16/17 10:33	1
Fluoride	<0.082		0.20	0.082	mg/L			01/16/17 10:33	1
Sulfate	<0.70		1.0	0.70	mg/L			01/16/17 10:33	1

Lab Sample ID: LCS 400-338580/5
Matrix: Water
Analysis Batch: 338580

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	10.7		mg/L		107	90 - 110
Fluoride	10.0	9.66		mg/L		97	90 - 110
Sulfate	10.0	10.5		mg/L		105	90 - 110

Lab Sample ID: LCSD 400-338580/6
Matrix: Water
Analysis Batch: 338580

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	2	15
Fluoride	10.0	10.8		mg/L		108	90 - 110	11	15
Sulfate	10.0	10.7		mg/L		107	90 - 110	1	15

Lab Sample ID: 400-132513-M-4 MS
Matrix: Water
Analysis Batch: 338580

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<89		1000	1090		mg/L		109	80 - 120
Fluoride	<8.2		1000	1010		mg/L		101	80 - 120
Sulfate	<70		1000	1090		mg/L		109	80 - 120

Lab Sample ID: 400-132513-M-4 MSD
Matrix: Water
Analysis Batch: 338580

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<89		1000	1070		mg/L		107	80 - 120	2	20
Fluoride	<8.2		1000	1120		mg/L		112	80 - 120	10	20
Sulfate	<70		1000	1090		mg/L		109	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-338540/1-A ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/17 11:50	01/18/17 15:36	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/17 11:50	01/18/17 15:36	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

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

Lab Sample ID: MB 400-338540/1-A ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/17 11:50	01/18/17 15:36	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/16/17 11:50	01/18/17 15:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/16/17 11:50	01/18/17 15:36	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/16/17 11:50	01/18/17 15:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 15:36	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/17 11:50	01/18/17 15:36	5
Boron	<0.021		0.050	0.021	mg/L		01/16/17 11:50	01/18/17 15:36	5
Zinc	0.0174	J	0.020	0.0065	mg/L		01/16/17 11:50	01/18/17 15:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/17 11:50	01/18/17 15:36	5
Calcium	<0.13		0.25	0.13	mg/L		01/16/17 11:50	01/18/17 15:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/17 11:50	01/18/17 15:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/17 11:50	01/18/17 15:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/17 11:50	01/18/17 15:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/17 11:50	01/18/17 15:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/17 11:50	01/18/17 15:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/17 11:50	01/18/17 15:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/17 11:50	01/18/17 15:36	5

Lab Sample ID: LCS 400-338540/2-A
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0515		mg/L		103	80 - 120
Copper	0.0500	0.0523		mg/L		105	80 - 120
Arsenic	0.0500	0.0521		mg/L		104	80 - 120
Nickel	0.0500	0.0520		mg/L		104	80 - 120
Barium	0.0500	0.0484		mg/L		97	80 - 120
Silver	0.0500	0.0475		mg/L		95	80 - 120
Beryllium	0.0500	0.0511		mg/L		102	80 - 120
Vanadium	0.0500	0.0512		mg/L		102	80 - 120
Boron	0.100	0.0978		mg/L		98	80 - 120
Zinc	0.0500	0.0515		mg/L		103	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Calcium	5.00	4.75		mg/L		95	80 - 120
Chromium	0.0500	0.0517		mg/L		103	80 - 120
Cobalt	0.0500	0.0496		mg/L		99	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Lithium	0.0500	0.0516		mg/L		103	80 - 120
Molybdenum	0.100	0.100		mg/L		100	80 - 120
Selenium	0.0500	0.0505		mg/L		101	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-132595-D-4-B MS ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0530		mg/L		106	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

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

Lab Sample ID: 400-132595-D-4-B MS ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Copper	<0.0021		0.0500	0.0542		mg/L		108	75 - 125	
Arsenic	0.0028		0.0500	0.0542		mg/L		103	75 - 125	
Nickel	0.0020	J	0.0500	0.0532		mg/L		103	75 - 125	
Barium	0.047		0.0500	0.0972		mg/L		100	75 - 125	
Silver	<0.00011		0.0500	0.0478		mg/L		96	75 - 125	
Beryllium	<0.00034		0.0500	0.0510		mg/L		102	75 - 125	
Vanadium	0.014		0.0500	0.0642		mg/L		100	75 - 125	
Boron	<0.021		0.100	0.116		mg/L		116	75 - 125	
Zinc	<0.0065		0.0500	0.0606		mg/L		121	75 - 125	
Cadmium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125	
Calcium	0.34		5.00	5.11		mg/L		95	75 - 125	
Chromium	<0.0011		0.0500	0.0523		mg/L		105	75 - 125	
Cobalt	0.0034		0.0500	0.0530		mg/L		99	75 - 125	
Lead	0.00054	J	0.0500	0.0509		mg/L		101	75 - 125	
Lithium	<0.0032		0.0500	0.0542		mg/L		108	75 - 125	
Molybdenum	<0.00085		0.100	0.0995		mg/L		99	75 - 125	
Selenium	<0.00024		0.0500	0.0507		mg/L		101	75 - 125	
Thallium	<0.00085		0.0100	0.0104		mg/L		104	75 - 125	

Lab Sample ID: 400-132595-D-4-C MSD ^5
Matrix: Water
Analysis Batch: 339013

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 338540

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Antimony	<0.0010		0.0500	0.0520		mg/L		104	75 - 125		2	20
Copper	<0.0021		0.0500	0.0536		mg/L		107	75 - 125		1	20
Arsenic	0.0028		0.0500	0.0553		mg/L		105	75 - 125		2	20
Nickel	0.0020	J	0.0500	0.0548		mg/L		106	75 - 125		3	20
Barium	0.047		0.0500	0.0957		mg/L		97	75 - 125		2	20
Silver	<0.00011		0.0500	0.0477		mg/L		95	75 - 125		0	20
Beryllium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125		1	20
Vanadium	0.014		0.0500	0.0652		mg/L		102	75 - 125		2	20
Boron	<0.021		0.100	0.109		mg/L		109	75 - 125		6	20
Zinc	<0.0065		0.0500	0.0604		mg/L		121	75 - 125		0	20
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125		1	20
Calcium	0.34		5.00	5.02		mg/L		94	75 - 125		2	20
Chromium	<0.0011		0.0500	0.0533		mg/L		107	75 - 125		2	20
Cobalt	0.0034		0.0500	0.0538		mg/L		101	75 - 125		1	20
Lead	0.00054	J	0.0500	0.0506		mg/L		100	75 - 125		1	20
Lithium	<0.0032		0.0500	0.0551		mg/L		110	75 - 125		2	20
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125		1	20
Selenium	<0.00024		0.0500	0.0502		mg/L		100	75 - 125		1	20
Thallium	<0.00085		0.0100	0.0104		mg/L		104	75 - 125		0	20

QC Sample Results

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

TestAmerica Job ID: 400-132523-1
SDG: Landfill #4

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-338641/14-A
Matrix: Water
Analysis Batch: 338774

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/17 15:03	01/17/17 12:35	1

Lab Sample ID: LCS 400-338641/15-A
Matrix: Water
Analysis Batch: 338774

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338641

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: 400-132478-C-1-C MS
Matrix: Water
Analysis Batch: 338774

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 338641

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00220		mg/L		109	80 - 120

Lab Sample ID: 400-132478-C-1-D MSD
Matrix: Water
Analysis Batch: 338774

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 338641

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00215		mg/L		107	80 - 120	2	20

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

Lab Sample ID: MB 400-338524/1
Matrix: Water
Analysis Batch: 338524

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			01/15/17 14:05	1

Lab Sample ID: LCS 400-338524/2
Matrix: Water
Analysis Batch: 338524

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	242		mg/L		83	78 - 122

Lab Sample ID: 400-132478-B-1 DU
Matrix: Water
Analysis Batch: 338524

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	18		18.0		mg/L		0	5

TestAmerica Pensacola

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

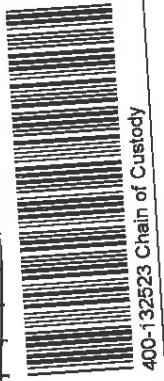
Chain of Custody Record

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

Client Information
 Client Contact: Joju Abraham
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE, B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-506-7239
 Email: JAbraham@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR + State Permit

Sampler: T. Payne *Prof.*, C. Hurdle *Lab.*, G. Jirak *G.J.*
 Lab PM: Whitmire, Cheyenne R
 Carrier Tracking Note(s):
 E-Mail: cheyenne.whitmire@testamericainc.com
 Job #: _____
 Page: 1 of 1
 COC No: _____

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)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Metals State Permit (EPA 6020 & 9320)		Cu, Ni, Sb, Ag, V, Zn		Total Number of Containers	Special Instructions/Note:
					Yes	No	Yes	No	I	D	D	D	D	D		
GWA-16	1/11/17	14:45	G	GW			X		X	X	X	X	X	X	3	
GWA-5	1/11/17	9:55	G	GW			X		X	X	X	X	X	X	3	
GWA-15	1/11/17	12:55	G	GW			X		X	X	X	X	X	X	4	extra volume for radium analysis
GWA-14	1/11/17	11:25	G	GW			X		X	X	X	X	X	X	3	
GWC-17	1/11/17	16:20	G	GW			X		X	X	X	X	X	X	3	
GWC-18	1/11/17	17:15	G	GW			X		X	X	X	X	X	X	3	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiologic

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____ Time: _____

Relinquished by: _____ Date/Time: 1/11/2017 8:35 Company: ERM

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

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

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

Special Instructions/QC Requirements: 400-132523

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

Method of Shipment: _____

Received by: _____ Date/Time: 01/11/17 08:55 Company: TASA

Received by: _____ Date/Time: _____ Company: _____

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: 0-10°C 09/10.9



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132523-1

SDG Number: Landfill #4

Login Number: 132523

List Number: 1

Creator: Kicklighter, Marilyn D

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	0.7°C, 0.9°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: 400-132523-1
SDG: Landfill #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132523-2

TestAmerica Sample Delivery Group: Landfill #4

Client Project/Site: CCR - Plant McIntosh

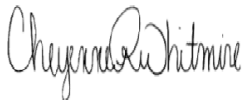
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:49:43 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: 400-132523-2
SDG: Landfill #4

Job ID: 400-132523-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132523-2

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-288174: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-16 (400-132523-1), GWA-5 (400-132523-2), GWA-15 (400-132523-3), GWA-14 (400-132523-4), GWC-17 (400-132523-5) and GWC-18 (400-132523-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-288171: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-16 (400-132523-1), GWA-5 (400-132523-2), GWA-15 (400-132523-3), GWA-14 (400-132523-4), GWC-17 (400-132523-5) and GWC-18 (400-132523-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.



Method Summary

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132523-1	GWA-16	Water	01/11/17 14:45	01/12/17 08:55
400-132523-2	GWA-5	Water	01/11/17 09:55	01/12/17 08:55
400-132523-3	GWA-15	Water	01/11/17 12:55	01/12/17 08:55
400-132523-4	GWA-14	Water	01/11/17 11:25	01/12/17 08:55
400-132523-5	GWC-17	Water	01/11/17 16:20	01/12/17 08:55
400-132523-6	GWC-18	Water	01/11/17 17:15	01/12/17 08:55

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Client Sample Results

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

TestAmerica Job ID: 400-132523-2
 SDG: Landfill #4

Client Sample ID: GWA-16

Lab Sample ID: 400-132523-1

Date Collected: 01/11/17 14:45

Matrix: Water

Date Received: 01/12/17 08:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.296		0.189	0.191	1.00	0.257	pCi/L	01/18/17 11:41	02/09/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					01/18/17 11:41	02/09/17 08:41	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.595		0.326	0.330	1.00	0.493	pCi/L	01/18/17 12:08	02/07/17 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					01/18/17 12:08	02/07/17 12:41	1
Y Carrier	82.6		40 - 110					01/18/17 12:08	02/07/17 12:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.891		0.376	0.381	5.00	0.493	pCi/L		02/17/17 09:16	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-2
 SDG: Landfill #4

Client Sample ID: GWA-5
Date Collected: 01/11/17 09:55
Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-2
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	0.221	U	0.189	0.190	1.00	0.287	pCi/L	01/18/17 11:41	02/09/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					01/18/17 11:41	02/09/17 08:41	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.62		0.426	0.451	1.00	0.564	pCi/L	01/18/17 12:08	02/07/17 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					01/18/17 12:08	02/07/17 12:45	1
Y Carrier	81.5		40 - 110					01/18/17 12:08	02/07/17 12:45	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	1.84		0.466	0.489	5.00	0.564	pCi/L		02/17/17 09:16	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

Client Sample ID: GWA-15

Lab Sample ID: 400-132523-3

Date Collected: 01/11/17 12:55

Matrix: Water

Date Received: 01/12/17 08:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.193	U	0.167	0.168	1.00	0.250	pCi/L	01/18/17 11:41	02/09/17 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		40 - 110					01/18/17 11:41	02/09/17 09:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.557		0.330	0.334	1.00	0.505	pCi/L	01/18/17 12:08	02/07/17 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		40 - 110					01/18/17 12:08	02/07/17 12:45	1
Y Carrier	85.6		40 - 110					01/18/17 12:08	02/07/17 12:45	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	0.750		0.369	0.373	5.00	0.505	pCi/L		02/17/17 09:16	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

Client Sample ID: GWA-14

Date Collected: 01/11/17 11:25

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-4

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	0.271	U	0.190	0.191	1.00	0.272	pCi/L	01/18/17 11:41	02/09/17 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					01/18/17 11:41	02/09/17 09:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.229	U	0.301	0.302	1.00	0.500	pCi/L	01/18/17 12:08	02/07/17 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					01/18/17 12:08	02/07/17 12:45	1
Y Carrier	85.2		40 - 110					01/18/17 12:08	02/07/17 12:45	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	0.500		0.356	0.357	5.00	0.500	pCi/L		02/17/17 09:16	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-2
 SDG: Landfill #4

Client Sample ID: GWC-17

Date Collected: 01/11/17 16:20

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-5

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	0.504		0.204	0.209	1.00	0.201	pCi/L	01/18/17 11:41	02/09/17 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/18/17 11:41	02/09/17 09:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.354	U	0.324	0.326	1.00	0.525	pCi/L	01/18/17 12:08	02/07/17 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/18/17 12:08	02/07/17 12:45	1
Y Carrier	83.7		40 - 110					01/18/17 12:08	02/07/17 12:45	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	0.858		0.383	0.387	5.00	0.525	pCi/L		02/17/17 09:16	1

Client Sample Results

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

TestAmerica Job ID: 400-132523-2
 SDG: Landfill #4

Client Sample ID: GWC-18

Lab Sample ID: 400-132523-6

Date Collected: 01/11/17 17:15

Matrix: Water

Date Received: 01/12/17 08:55

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.219	U	0.162	0.163	1.00	0.229	pCi/L	01/18/17 11:41	02/09/17 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					01/18/17 11:41	02/09/17 09:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.220	U	0.290	0.291	1.00	0.483	pCi/L	01/18/17 12:08	02/07/17 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					01/18/17 12:08	02/07/17 12:45	1
Y Carrier	80.0		40 - 110					01/18/17 12:08	02/07/17 12:45	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	0.438	U	0.333	0.334	5.00	0.483	pCi/L		02/17/17 09:16	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

Qualifiers

Rad

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

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

Client Sample ID: GWA-16

Date Collected: 01/11/17 14:45

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288171	01/18/17 11:41	AS	TAL SL
Total/NA	Analysis	9315		1	291734	02/09/17 08:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288174	01/18/17 12:08	AS	TAL SL
Total/NA	Analysis	9320		1	291322	02/07/17 12:41	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293069	02/17/17 09:16	RTM	TAL SL

Client Sample ID: GWA-5

Date Collected: 01/11/17 09:55

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288171	01/18/17 11:41	AS	TAL SL
Total/NA	Analysis	9315		1	291734	02/09/17 08:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288174	01/18/17 12:08	AS	TAL SL
Total/NA	Analysis	9320		1	291320	02/07/17 12:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293069	02/17/17 09:16	RTM	TAL SL

Client Sample ID: GWA-15

Date Collected: 01/11/17 12:55

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288171	01/18/17 11:41	AS	TAL SL
Total/NA	Analysis	9315		1	291708	02/09/17 09:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288174	01/18/17 12:08	AS	TAL SL
Total/NA	Analysis	9320		1	291320	02/07/17 12:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293069	02/17/17 09:16	RTM	TAL SL

Client Sample ID: GWA-14

Date Collected: 01/11/17 11:25

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288171	01/18/17 11:41	AS	TAL SL
Total/NA	Analysis	9315		1	291708	02/09/17 09:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288174	01/18/17 12:08	AS	TAL SL
Total/NA	Analysis	9320		1	291320	02/07/17 12:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293069	02/17/17 09:16	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132523-2
 SDG: Landfill #4

Client Sample ID: GWC-17

Date Collected: 01/11/17 16:20

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288171	01/18/17 11:41	AS	TAL SL
Total/NA	Analysis	9315		1	291708	02/09/17 09:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288174	01/18/17 12:08	AS	TAL SL
Total/NA	Analysis	9320		1	291320	02/07/17 12:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293069	02/17/17 09:16	RTM	TAL SL

Client Sample ID: GWC-18

Date Collected: 01/11/17 17:15

Date Received: 01/12/17 08:55

Lab Sample ID: 400-132523-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288171	01/18/17 11:41	AS	TAL SL
Total/NA	Analysis	9315		1	291708	02/09/17 09:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288174	01/18/17 12:08	AS	TAL SL
Total/NA	Analysis	9320		1	291320	02/07/17 12:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293069	02/17/17 09:16	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: 400-132523-2
SDG: Landfill #4

Rad

Prep Batch: 288171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total/NA	Water	PrecSep-21	
400-132523-2	GWA-5	Total/NA	Water	PrecSep-21	
400-132523-3	GWA-15	Total/NA	Water	PrecSep-21	
400-132523-4	GWA-14	Total/NA	Water	PrecSep-21	
400-132523-5	GWC-17	Total/NA	Water	PrecSep-21	
400-132523-6	GWC-18	Total/NA	Water	PrecSep-21	
MB 160-288171/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-288171/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-288171/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 288174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132523-1	GWA-16	Total/NA	Water	PrecSep_0	
400-132523-2	GWA-5	Total/NA	Water	PrecSep_0	
400-132523-3	GWA-15	Total/NA	Water	PrecSep_0	
400-132523-4	GWA-14	Total/NA	Water	PrecSep_0	
400-132523-5	GWC-17	Total/NA	Water	PrecSep_0	
400-132523-6	GWC-18	Total/NA	Water	PrecSep_0	
MB 160-288174/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-288174/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-288174/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-132523-2
SDG: Landfill #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-288171/1-A
Matrix: Water
Analysis Batch: 291733

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288171

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07446	U	0.142	0.142	1.00	0.254	pCi/L	01/18/17 11:41	02/09/17 08:37	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					01/18/17 11:41	02/09/17 08:37	1

Lab Sample ID: LCS 160-288171/2-A
Matrix: Water
Analysis Batch: 292630

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288171

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	7.432		0.856	1.00	0.144	pCi/L	124	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	77.5		40 - 110						

Lab Sample ID: LCSD 160-288171/3-A
Matrix: Water
Analysis Batch: 292630

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 288171

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	6.01	7.339		0.857	1.00	0.170	pCi/L	122	68 - 137	0.05	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	73.8		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-288174/1-A
Matrix: Water
Analysis Batch: 291322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288174

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.6724		0.398	0.403	1.00	0.608	pCi/L	01/18/17 12:08	02/07/17 12:39	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					01/18/17 12:08	02/07/17 12:39	1
Y Carrier	70.7		40 - 110					01/18/17 12:08	02/07/17 12:39	1

QC Sample Results

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

TestAmerica Job ID: 400-132523-2
 SDG: Landfill #4

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

Lab Sample ID: LCS 160-288174/2-A
Matrix: Water
Analysis Batch: 291322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288174

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.9	19.06		2.02	1.00	0.490	pCi/L	137	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	77.5		40 - 110
Y Carrier	84.1		40 - 110

Lab Sample ID: LCSD 160-288174/3-A
Matrix: Water
Analysis Batch: 291322

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 288174

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.9	17.52		1.88	1.00	0.435	pCi/L	126	56 - 140	0.39	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	73.8		40 - 110
Y Carrier	89.7		40 - 110

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

Chain of Custody Record

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

Client Information		Sampler: T. Payne <i>Trf.</i> , C. Hurdle <i>Gr.</i> , G. Jirak <i>G.J.</i> Lab PM: Whitmire, Cheyenne R Phone: [blank] E-Mail: cheyenne.whitmire@testamericainc.com	
Company: Southern Company Address: 241 Ralph McGill Blvd SE, B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: Plant McIntosh - Landfill #4 Site: CCR + State Permit		Carrier Tracking Note(s): Analysis Requested	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:		Total Number of Containers:	
Sample Identification GWA-16 GWA-5 GWA-15 GWA-14 GWC-17 GWC-18		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) TDS - SM 2540C; Cl, F, SO4 - EPA 300 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 Cu, Ni, Sb, Ag, V, Zn	
Sample Date: 1/11/17 Sample Time: 14:45 Type (C=Comp, G=grab): G Preservation Code: GW		Special Instructions/Note: extra volume for radium analysis	
Sample Date: 1/11/17 Sample Time: 9:55 Type (C=Comp, G=grab): G Preservation Code: GW		Special Instructions/Note: extra volume for radium analysis	
Sample Date: 1/11/17 Sample Time: 12:55 Type (C=Comp, G=grab): G Preservation Code: GW		Special Instructions/Note: extra volume for radium analysis	
Sample Date: 1/11/17 Sample Time: 11:25 Type (C=Comp, G=grab): G Preservation Code: GW		Special Instructions/Note: extra volume for radium analysis	
Sample Date: 1/11/17 Sample Time: 16:20 Type (C=Comp, G=grab): G Preservation Code: GW		Special Instructions/Note: extra volume for radium analysis	
Sample Date: 1/11/17 Sample Time: 17:15 Type (C=Comp, G=grab): G Preservation Code: GW		Special Instructions/Note: extra volume for radium analysis	
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"/> Radiologic		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: Mon	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements: 400-132523 Chain of Custody	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 1/11/2017 8:35 Company: ERM		Relinquished by: [Signature] Date/Time: 01/21/17 08:55 Company: TASA	
Relinquished by: [Signature] Date/Time: [blank] Company: [blank]		Relinquished by: [Signature] Date/Time: [blank] Company: [blank]	
Relinquished by: [Signature] Date/Time: [blank] Company: [blank]		Relinquished by: [Signature] Date/Time: [blank] Company: [blank]	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 0-10.7 09/10.9	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132523-2

SDG Number: Landfill #4

Login Number: 132523

List Number: 1

Creator: Kicklighter, Marilyn D

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	0.7°C, 0.9°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: 400-132523-2
SDG: Landfill #4

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132523-2
SDG: Landfill #4

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Certification renewal pending - certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-132615-1

TestAmerica Sample Delivery Group: Landfill #4

Client Project/Site: CCR - Plant McIntosh

For:

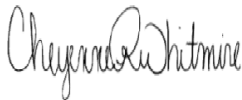
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/21/2017 5:56:54 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-1

Lab Sample ID: 400-132615-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.3		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	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00035	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0031		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-132615-2

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
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.37		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0018	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-12

Lab Sample ID: 400-132615-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Arsenic	0.00062	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.60		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00050	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0075		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-132615-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.7		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.41		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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-11 (Continued)

Lab Sample ID: 400-132615-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0051		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00025	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.010		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-21

Lab Sample ID: 400-132615-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.93		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0058		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-132615-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	0.0063		0.0025	0.0014	mg/L	5		6020	Total Recoverable

Client Sample ID: FERB-1

Lab Sample ID: 400-132615-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	0.0080		0.0025	0.0014	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-2

Lab Sample ID: 400-132615-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.8		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.42		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	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.9		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: 400-132615-1
SDG: Landfill #4

Client Sample ID: DUP-2 (Continued)

Lab Sample ID: 400-132615-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0049		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Vanadium	0.0076		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc - RA	0.013	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-10

Lab Sample ID: 400-132615-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.12	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.2		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00077	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	0.041	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	14		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0061		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0044	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Vanadium	0.0087		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-132615-10

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
Arsenic	0.00055	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.41		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0091		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-20

Lab Sample ID: 400-132615-11

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
Fluoride	0.083	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.8		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-20 (Continued)

Lab Sample ID: 400-132615-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00036	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0017	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0074		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-2

Lab Sample ID: 400-132615-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00049	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0021	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Mercury	0.000098	J	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: FERB-2

Lab Sample ID: 400-132615-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	0.0020	J	0.0025	0.0014	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: 400-132615-1
SDG: Landfill #4

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: 400-132615-1
SDG: Landfill #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132615-1	GWC-1	Water	01/12/17 09:12	01/13/17 11:57
400-132615-2	GWA-13	Water	01/12/17 09:40	01/13/17 11:57
400-132615-3	GWC-12	Water	01/12/17 10:35	01/13/17 11:57
400-132615-4	GWC-11	Water	01/12/17 13:35	01/13/17 11:57
400-132615-5	GWC-21	Water	01/12/17 15:00	01/13/17 11:57
400-132615-6	FB-1	Water	01/12/17 14:05	01/13/17 11:57
400-132615-7	FERB-1	Water	01/12/17 14:20	01/13/17 11:57
400-132615-8	DUP-2	Water	01/12/17 00:00	01/13/17 11:57
400-132615-9	GWC-10	Water	01/12/17 12:48	01/13/17 11:57
400-132615-10	GWC-9	Water	01/13/17 10:55	01/13/17 11:57
400-132615-11	GWC-20	Water	01/13/17 09:35	01/13/17 11:57
400-132615-12	FB-2	Water	01/13/17 08:15	01/13/17 11:57
400-132615-13	FERB-2	Water	01/13/17 08:30	01/13/17 11:57

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-1
Date Collected: 01/12/17 09:12
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.3		1.0	0.89	mg/L			01/18/17 08:18	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 08:18	1
Sulfate	1.7		1.0	0.70	mg/L			01/18/17 08:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/19/17 13:29	01/20/17 12:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 12:52	5
Barium	0.046		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 12:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 12:52	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 12:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 12:52	5
Calcium	2.5		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 12:52	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 12:52	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 12:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 12:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 12:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 12:52	5
Selenium	0.00035	J	0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 12:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 12:52	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 12:52	5
Vanadium	0.0031		0.0025	0.0014	mg/L		01/19/17 13:29	01/31/17 12:20	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 12:52	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 12:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:00	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 14:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWA-13

Date Collected: 01/12/17 09:40

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-2

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			01/18/17 09:26	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 09:26	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 09:26	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		01/19/17 13:29	01/20/17 18:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 18:52	5
Barium	0.012		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 18:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 18:52	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 18:52	5
Calcium	0.37		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 18:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 18:52	5
Cobalt	0.0014 J		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 18:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 18:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 18:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 18:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 18:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 18:52	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 18:52	5
Vanadium	0.0018 J		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 18:52	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 18:52	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 18:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:05	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 13:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-12

Date Collected: 01/12/17 10:35

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			01/18/17 09:49	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 09:49	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 09:49	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		01/19/17 13:29	01/20/17 13:19	5
Arsenic	0.00062	J	0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 13:19	5
Barium	0.010		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 13:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 13:19	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 13:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 13:19	5
Calcium	0.60		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 13:19	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 13:19	5
Cobalt	0.00050	J	0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 13:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 13:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 13:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 13:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 13:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 13:19	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 13:19	5
Vanadium	0.0075		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 13:19	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 13:19	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 13:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-11
Date Collected: 01/12/17 13:35
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.7		1.0	0.89	mg/L			01/18/17 10:12	1
Fluoride	0.41		0.20	0.082	mg/L			01/18/17 10:12	1
Sulfate	4.6		1.0	0.70	mg/L			01/18/17 10:12	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		01/19/17 13:29	01/20/17 13:51	5
Arsenic	0.0016		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 13:51	5
Barium	0.010		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 13:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 13:51	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 13:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 13:51	5
Calcium	8.1		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 13:51	5
Chromium	0.0051		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 13:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 13:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 13:51	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 13:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 13:51	5
Selenium	0.00025	J	0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 13:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 13:51	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 13:51	5
Vanadium	0.010		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 13:51	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 13:51	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 13:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 13:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-21
Date Collected: 01/12/17 15:00
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.3		1.0	0.89	mg/L			01/18/17 10:35	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 10:35	1
Sulfate	1.2		1.0	0.70	mg/L			01/18/17 10:35	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		01/19/17 13:29	01/20/17 13:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 13:56	5
Barium	0.014		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 13:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 13:56	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 13:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 13:56	5
Calcium	0.93		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 13:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 13:56	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 13:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 13:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 13:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 13:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 13:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 13:56	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 13:56	5
Vanadium	0.0058		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 13:56	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 13:56	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 13:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:36	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		01/17/17 09:54	01/19/17 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: FB-1
Date Collected: 01/12/17 14:05
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/18/17 11:43	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 11:43	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 11:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/19/17 13:29	01/20/17 14:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 14:00	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 14:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:00	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 14:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:00	5
Calcium	<0.13		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 14:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 14:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 14:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 14:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 14:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 14:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 14:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 14:00	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 14:00	5
Vanadium	0.0063		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 14:00	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 14:00	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 14:00	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:41	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		01/17/17 09:54	01/19/17 13:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: FERB-1
Date Collected: 01/12/17 14:20
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-7
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			01/18/17 12:06	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 12:06	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 12:06	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		01/19/17 13:29	01/20/17 14:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 14:05	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 14:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:05	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 14:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:05	5
Calcium	<0.13		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 14:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 14:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 14:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 14:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 14:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 14:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 14:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 14:05	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 14:05	5
Vanadium	0.0080		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 14:05	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 14:05	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 14:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:45	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: DUP-2

Date Collected: 01/12/17 00:00

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.8		1.0	0.89	mg/L			01/18/17 12:29	1
Fluoride	0.42		0.20	0.082	mg/L			01/18/17 12:29	1
Sulfate	4.6		1.0	0.70	mg/L			01/18/17 12:29	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		01/19/17 13:29	01/20/17 14:09	5
Arsenic	0.0013		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 14:09	5
Barium	0.010		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 14:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:09	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 14:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:09	5
Calcium	7.9		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 14:09	5
Chromium	0.0049		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 14:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 14:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 14:09	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 14:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 14:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 14:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 14:09	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 14:09	5
Vanadium	0.0076		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 14:09	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 14:09	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 14:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	0.013	J	0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:49	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		01/17/17 09:54	01/19/17 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-10

Date Collected: 01/12/17 12:48

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-9

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.89	mg/L			01/18/17 12:52	1
Fluoride	0.12	J	0.20	0.082	mg/L			01/18/17 12:52	1
Sulfate	4.2		1.0	0.70	mg/L			01/18/17 12:52	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		01/19/17 13:29	01/20/17 14:14	5
Arsenic	0.00077	J	0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 14:14	5
Barium	0.015		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 14:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:14	5
Boron	0.041	J	0.050	0.021	mg/L		01/19/17 13:29	01/20/17 14:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:14	5
Calcium	14		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 14:14	5
Chromium	0.0061		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 14:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 14:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 14:14	5
Lithium	0.0044	J	0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 14:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 14:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 14:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 14:14	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 14:14	5
Vanadium	0.0087		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 14:14	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 14:14	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 14:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:54	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-9
Date Collected: 01/13/17 10:55
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-10
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			01/18/17 13:15	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 13:15	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 13:15	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		01/19/17 13:29	01/20/17 14:19	5
Arsenic	0.00055	J	0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 14:19	5
Barium	0.025		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 14:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:19	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 14:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:19	5
Calcium	0.41		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 14:19	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 14:19	5
Cobalt	0.00052	J	0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 14:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 14:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 14:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 14:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 14:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 14:19	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 14:19	5
Vanadium	0.0091		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 14:19	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 14:19	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 14:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 17:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-20

Date Collected: 01/13/17 09:35

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-11

Matrix: Water

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			01/18/17 13:37	1
Fluoride	0.083	J	0.20	0.082	mg/L			01/18/17 13:37	1
Sulfate	1.8		1.0	0.70	mg/L			01/18/17 13:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/19/17 13:29	01/20/17 14:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 14:23	5
Barium	0.021		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 14:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:23	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 14:23	5
Cadmium	0.00036	J	0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 14:23	5
Calcium	1.3		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 14:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 14:23	5
Cobalt	0.0017	J	0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 14:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 14:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 14:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 14:23	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 14:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 14:23	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 14:23	5
Vanadium	0.0074		0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 14:23	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 14:23	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 14:23	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 18:03	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		01/17/17 09:54	01/19/17 15:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: FB-2

Date Collected: 01/13/17 08:15

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-12

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			01/18/17 14:23	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 14:23	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 14:23	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		01/19/17 13:29	01/20/17 15:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 15:09	5
Barium	0.00049	J	0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 15:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 15:09	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 15:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 15:09	5
Calcium	<0.13		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 15:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 15:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 15:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 15:09	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 15:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 15:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 15:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 15:09	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 15:09	5
Vanadium	0.0021	J	0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 15:09	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 15:09	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 15:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 18:08	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000098	J	0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 14:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/17 13:44	1

Client Sample Results

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: FERB-2

Date Collected: 01/13/17 08:30

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-13

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			01/18/17 14:46	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 14:46	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 14:46	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		01/19/17 13:29	01/20/17 15:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/19/17 13:29	01/20/17 15:13	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/19/17 13:29	01/20/17 15:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 15:13	5
Boron	<0.021		0.050	0.021	mg/L		01/19/17 13:29	01/20/17 15:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/19/17 13:29	01/20/17 15:13	5
Calcium	<0.13		0.25	0.13	mg/L		01/19/17 13:29	01/20/17 15:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/19/17 13:29	01/20/17 15:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/19/17 13:29	01/20/17 15:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/19/17 13:29	01/20/17 15:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/19/17 13:29	01/20/17 15:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/19/17 13:29	01/20/17 15:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/19/17 13:29	01/20/17 15:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/19/17 13:29	01/20/17 15:13	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/19/17 13:29	01/20/17 15:13	5
Vanadium	0.0020	J	0.0025	0.0014	mg/L		01/19/17 13:29	01/20/17 15:13	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/19/17 13:29	01/20/17 15:13	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/19/17 13:29	01/20/17 15:13	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 18:12	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/17 13:44	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-1

Date Collected: 01/12/17 09:12

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 08:18	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 12:52	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:00	DRE	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 12:20	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 14:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: GWA-13

Date Collected: 01/12/17 09:40

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 09:26	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 18:52	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:05	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: GWC-12

Date Collected: 01/12/17 10:35

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 09:49	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 13:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:09	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-11

Lab Sample ID: 400-132615-4

Date Collected: 01/12/17 13:35

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 10:12	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 13:51	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:32	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: GWC-21

Lab Sample ID: 400-132615-5

Date Collected: 01/12/17 15:00

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 10:35	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 13:56	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:36	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-132615-6

Date Collected: 01/12/17 14:05

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 11:43	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 14:00	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:41	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: FERB-1

Lab Sample ID: 400-132615-7

Date Collected: 01/12/17 14:20

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 12:06	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 14:05	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:45	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: DUP-2

Lab Sample ID: 400-132615-8

Date Collected: 01/12/17 00:00

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 12:29	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 14:09	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:49	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: GWC-10

Lab Sample ID: 400-132615-9

Date Collected: 01/12/17 12:48

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 12:52	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 14:14	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:54	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 13:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Client Sample ID: GWC-9

Lab Sample ID: 400-132615-10

Date Collected: 01/13/17 10:55

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 13:15	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 14:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 17:59	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 15:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: GWC-20

Lab Sample ID: 400-132615-11

Date Collected: 01/13/17 09:35

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 13:37	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 14:23	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 18:03	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 15:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Client Sample ID: FB-2

Lab Sample ID: 400-132615-12

Date Collected: 01/13/17 08:15

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 14:23	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 15:09	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 18:08	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 14:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	RRC	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-132615-1
 SDG: Landfill #4

Client Sample ID: FERB-2

Lab Sample ID: 400-132615-13

Date Collected: 01/13/17 08:30

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	338888	01/18/17 14:46	KH1	TAL PEN
Total Recoverable	Prep	3005A			339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 15:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339094	01/19/17 13:29	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340403	01/30/17 18:12	DRE	TAL PEN
Total/NA	Prep	7470A			338713	01/17/17 09:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339118	01/19/17 14:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	338726	01/17/17 13:44	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: 400-132615-1
SDG: Landfill #4

HPLC/IC

Analysis Batch: 338888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total/NA	Water	300.0	
400-132615-2	GWA-13	Total/NA	Water	300.0	
400-132615-3	GWC-12	Total/NA	Water	300.0	
400-132615-4	GWC-11	Total/NA	Water	300.0	
400-132615-5	GWC-21	Total/NA	Water	300.0	
400-132615-6	FB-1	Total/NA	Water	300.0	
400-132615-7	FERB-1	Total/NA	Water	300.0	
400-132615-8	DUP-2	Total/NA	Water	300.0	
400-132615-9	GWC-10	Total/NA	Water	300.0	
400-132615-10	GWC-9	Total/NA	Water	300.0	
400-132615-11	GWC-20	Total/NA	Water	300.0	
400-132615-12	FB-2	Total/NA	Water	300.0	
400-132615-13	FERB-2	Total/NA	Water	300.0	
MB 400-338888/4	Method Blank	Total/NA	Water	300.0	
LCS 400-338888/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-338888/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132615-1 MS	GWC-1	Total/NA	Water	300.0	
400-132615-1 MSD	GWC-1	Total/NA	Water	300.0	

Metals

Prep Batch: 338713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total/NA	Water	7470A	
400-132615-2	GWA-13	Total/NA	Water	7470A	
400-132615-3	GWC-12	Total/NA	Water	7470A	
400-132615-4	GWC-11	Total/NA	Water	7470A	
400-132615-5	GWC-21	Total/NA	Water	7470A	
400-132615-6	FB-1	Total/NA	Water	7470A	
400-132615-7	FERB-1	Total/NA	Water	7470A	
400-132615-8	DUP-2	Total/NA	Water	7470A	
400-132615-9	GWC-10	Total/NA	Water	7470A	
400-132615-10	GWC-9	Total/NA	Water	7470A	
400-132615-11	GWC-20	Total/NA	Water	7470A	
400-132615-12	FB-2	Total/NA	Water	7470A	
400-132615-13	FERB-2	Total/NA	Water	7470A	
MB 400-338713/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-338713/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132615-1 MS	GWC-1	Total/NA	Water	7470A	
400-132615-1 MSD	GWC-1	Total/NA	Water	7470A	

Prep Batch: 339094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total Recoverable	Water	3005A	
400-132615-1 - RA	GWC-1	Total Recoverable	Water	3005A	
400-132615-2 - RA	GWA-13	Total Recoverable	Water	3005A	
400-132615-2	GWA-13	Total Recoverable	Water	3005A	
400-132615-3 - RA	GWC-12	Total Recoverable	Water	3005A	
400-132615-3	GWC-12	Total Recoverable	Water	3005A	
400-132615-4 - RA	GWC-11	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Metals (Continued)

Prep Batch: 339094 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-4	GWC-11	Total Recoverable	Water	3005A	
400-132615-5	GWC-21	Total Recoverable	Water	3005A	
400-132615-5 - RA	GWC-21	Total Recoverable	Water	3005A	
400-132615-6	FB-1	Total Recoverable	Water	3005A	
400-132615-6 - RA	FB-1	Total Recoverable	Water	3005A	
400-132615-7	FERB-1	Total Recoverable	Water	3005A	
400-132615-7 - RA	FERB-1	Total Recoverable	Water	3005A	
400-132615-8 - RA	DUP-2	Total Recoverable	Water	3005A	
400-132615-8	DUP-2	Total Recoverable	Water	3005A	
400-132615-9	GWC-10	Total Recoverable	Water	3005A	
400-132615-9 - RA	GWC-10	Total Recoverable	Water	3005A	
400-132615-10	GWC-9	Total Recoverable	Water	3005A	
400-132615-10 - RA	GWC-9	Total Recoverable	Water	3005A	
400-132615-11 - RA	GWC-20	Total Recoverable	Water	3005A	
400-132615-11	GWC-20	Total Recoverable	Water	3005A	
400-132615-12 - RA	FB-2	Total Recoverable	Water	3005A	
400-132615-12	FB-2	Total Recoverable	Water	3005A	
400-132615-13 - RA	FERB-2	Total Recoverable	Water	3005A	
400-132615-13	FERB-2	Total Recoverable	Water	3005A	
MB 400-339094/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339094/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132615-2 MS	GWA-13	Total Recoverable	Water	3005A	
400-132615-2 MSD	GWA-13	Total Recoverable	Water	3005A	
400-132615-11 MS	GWC-20	Total Recoverable	Water	3005A	
400-132615-11 MSD	GWC-20	Total Recoverable	Water	3005A	

Analysis Batch: 339118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total/NA	Water	7470A	338713
400-132615-2	GWA-13	Total/NA	Water	7470A	338713
400-132615-3	GWC-12	Total/NA	Water	7470A	338713
400-132615-4	GWC-11	Total/NA	Water	7470A	338713
400-132615-5	GWC-21	Total/NA	Water	7470A	338713
400-132615-6	FB-1	Total/NA	Water	7470A	338713
400-132615-7	FERB-1	Total/NA	Water	7470A	338713
400-132615-8	DUP-2	Total/NA	Water	7470A	338713
400-132615-9	GWC-10	Total/NA	Water	7470A	338713
400-132615-10	GWC-9	Total/NA	Water	7470A	338713
400-132615-11	GWC-20	Total/NA	Water	7470A	338713
400-132615-12	FB-2	Total/NA	Water	7470A	338713
400-132615-13	FERB-2	Total/NA	Water	7470A	338713
MB 400-338713/14-A	Method Blank	Total/NA	Water	7470A	338713
LCS 400-338713/15-A	Lab Control Sample	Total/NA	Water	7470A	338713
400-132615-1 MS	GWC-1	Total/NA	Water	7470A	338713
400-132615-1 MSD	GWC-1	Total/NA	Water	7470A	338713

Analysis Batch: 339365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total Recoverable	Water	6020	339094
400-132615-2	GWA-13	Total Recoverable	Water	6020	339094
400-132615-3	GWC-12	Total Recoverable	Water	6020	339094

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Metals (Continued)

Analysis Batch: 339365 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-4	GWC-11	Total Recoverable	Water	6020	339094
400-132615-5	GWC-21	Total Recoverable	Water	6020	339094
400-132615-6	FB-1	Total Recoverable	Water	6020	339094
400-132615-7	FERB-1	Total Recoverable	Water	6020	339094
400-132615-8	DUP-2	Total Recoverable	Water	6020	339094
400-132615-9	GWC-10	Total Recoverable	Water	6020	339094
400-132615-10	GWC-9	Total Recoverable	Water	6020	339094
400-132615-11	GWC-20	Total Recoverable	Water	6020	339094
400-132615-12	FB-2	Total Recoverable	Water	6020	339094
400-132615-13	FERB-2	Total Recoverable	Water	6020	339094
LCS 400-339094/2-A	Lab Control Sample	Total Recoverable	Water	6020	339094
400-132615-2 MS	GWA-13	Total Recoverable	Water	6020	339094
400-132615-2 MSD	GWA-13	Total Recoverable	Water	6020	339094
400-132615-11 MS	GWC-20	Total Recoverable	Water	6020	339094
400-132615-11 MSD	GWC-20	Total Recoverable	Water	6020	339094

Analysis Batch: 340403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1 - RA	GWC-1	Total Recoverable	Water	6020	339094
400-132615-2 - RA	GWA-13	Total Recoverable	Water	6020	339094
400-132615-3 - RA	GWC-12	Total Recoverable	Water	6020	339094
400-132615-4 - RA	GWC-11	Total Recoverable	Water	6020	339094
400-132615-5 - RA	GWC-21	Total Recoverable	Water	6020	339094
400-132615-6 - RA	FB-1	Total Recoverable	Water	6020	339094
400-132615-7 - RA	FERB-1	Total Recoverable	Water	6020	339094
400-132615-8 - RA	DUP-2	Total Recoverable	Water	6020	339094
400-132615-9 - RA	GWC-10	Total Recoverable	Water	6020	339094
400-132615-10 - RA	GWC-9	Total Recoverable	Water	6020	339094
400-132615-11 - RA	GWC-20	Total Recoverable	Water	6020	339094
400-132615-12 - RA	FB-2	Total Recoverable	Water	6020	339094
400-132615-13 - RA	FERB-2	Total Recoverable	Water	6020	339094
MB 400-339094/1-A ^5	Method Blank	Total Recoverable	Water	6020	339094
LCS 400-339094/2-A	Lab Control Sample	Total Recoverable	Water	6020	339094

Analysis Batch: 340556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total Recoverable	Water	6020	339094
MB 400-339094/1-A ^5	Method Blank	Total Recoverable	Water	6020	339094

General Chemistry

Analysis Batch: 338726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total/NA	Water	SM 2540C	
400-132615-2	GWA-13	Total/NA	Water	SM 2540C	
400-132615-3	GWC-12	Total/NA	Water	SM 2540C	
400-132615-4	GWC-11	Total/NA	Water	SM 2540C	
400-132615-5	GWC-21	Total/NA	Water	SM 2540C	
400-132615-6	FB-1	Total/NA	Water	SM 2540C	
400-132615-7	FERB-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

General Chemistry (Continued)

Analysis Batch: 338726 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-8	DUP-2	Total/NA	Water	SM 2540C	
400-132615-9	GWC-10	Total/NA	Water	SM 2540C	
400-132615-10	GWC-9	Total/NA	Water	SM 2540C	
400-132615-11	GWC-20	Total/NA	Water	SM 2540C	
400-132615-12	FB-2	Total/NA	Water	SM 2540C	
400-132615-13	FERB-2	Total/NA	Water	SM 2540C	
MB 400-338726/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-338726/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132615-3 DU	GWC-12	Total/NA	Water	SM 2540C	
400-132615-4 DU	GWC-11	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-338888/4
Matrix: Water
Analysis Batch: 338888

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			01/18/17 07:09	1
Fluoride	<0.082		0.20	0.082	mg/L			01/18/17 07:09	1
Sulfate	<0.70		1.0	0.70	mg/L			01/18/17 07:09	1

Lab Sample ID: LCS 400-338888/5
Matrix: Water
Analysis Batch: 338888

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 400-338888/6
Matrix: Water
Analysis Batch: 338888

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	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

Lab Sample ID: 400-132615-1 MS
Matrix: Water
Analysis Batch: 338888

Client Sample ID: GWC-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.3		10.0	18.5		mg/L		112	80 - 120
Fluoride	<0.082		10.0	11.4		mg/L		114	80 - 120
Sulfate	1.7		10.0	12.7		mg/L		110	80 - 120

Lab Sample ID: 400-132615-1 MSD
Matrix: Water
Analysis Batch: 338888

Client Sample ID: GWC-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	7.3		10.0	18.5		mg/L		112	80 - 120	0	20
Fluoride	<0.082		10.0	11.4		mg/L		114	80 - 120	1	20
Sulfate	1.7		10.0	12.7		mg/L		110	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339094/1-A ^5
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/19/17 13:29	01/30/17 16:51	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-339094/1-A ^5
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/19/17 13:29	01/31/17 12:16	5

Lab Sample ID: LCS 400-339094/2-A
Matrix: Water
Analysis Batch: 339365

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0525		mg/L		105	80 - 120
Arsenic	0.0500	0.0518		mg/L		104	80 - 120
Barium	0.0500	0.0510		mg/L		102	80 - 120
Beryllium	0.0500	0.0531		mg/L		106	80 - 120
Boron	0.100	0.0997		mg/L		100	80 - 120
Cadmium	0.0500	0.0511		mg/L		102	80 - 120
Calcium	5.00	4.77		mg/L		95	80 - 120
Chromium	0.0500	0.0512		mg/L		102	80 - 120
Cobalt	0.0500	0.0483		mg/L		97	80 - 120
Lead	0.0500	0.0483		mg/L		97	80 - 120
Lithium	0.0500	0.0539		mg/L		108	80 - 120
Molybdenum	0.100	0.101		mg/L		101	80 - 120
Selenium	0.0500	0.0503		mg/L		101	80 - 120
Thallium	0.0100	0.0100		mg/L		100	80 - 120
Nickel	0.0500	0.0512		mg/L		102	80 - 120
Vanadium	0.0500	0.0515		mg/L		103	80 - 120
Silver	0.0500	0.0478		mg/L		96	80 - 120
Copper	0.0500	0.0507		mg/L		101	80 - 120

Lab Sample ID: LCS 400-339094/2-A
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.0500	0.0516		mg/L		103	80 - 120
Zinc	0.0500	0.0525		mg/L		105	80 - 120

Lab Sample ID: 400-132615-2 MS
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWA-13
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0537		mg/L		107	75 - 125
Arsenic	<0.00046		0.0500	0.0508		mg/L		102	75 - 125
Barium	0.012		0.0500	0.0629		mg/L		103	75 - 125
Beryllium	<0.00034		0.0500	0.0524		mg/L		105	75 - 125
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125
Calcium	0.37		5.00	5.18		mg/L		96	75 - 125
Chromium	<0.0011		0.0500	0.0520		mg/L		104	75 - 125
Cobalt	0.0014	J	0.0500	0.0502		mg/L		97	75 - 125
Lead	<0.00035		0.0500	0.0486		mg/L		97	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-132615-2 MS
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWA-13
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Lithium	<0.0032		0.0500	0.0537		mg/L		107	75 - 125	
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125	
Selenium	<0.00024		0.0500	0.0512		mg/L		102	75 - 125	
Thallium	<0.000085		0.0100	0.00998		mg/L		100	75 - 125	
Nickel	<0.0018		0.0500	0.0524		mg/L		105	75 - 125	
Vanadium	0.0018	J	0.0500	0.0521		mg/L		101	75 - 125	
Silver	<0.00011		0.0500	0.0470		mg/L		94	75 - 125	
Copper	<0.0021		0.0500	0.0509		mg/L		102	75 - 125	
Zinc	<0.0065	^	0.0500	0.0517	^	mg/L		103	75 - 125	

Lab Sample ID: 400-132615-2 MSD
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWA-13
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	Limit
Antimony	<0.0010		0.0500	0.0528		mg/L		106	75 - 125	2	20	
Arsenic	<0.00046		0.0500	0.0515		mg/L		103	75 - 125	1	20	
Barium	0.012		0.0500	0.0644		mg/L		106	75 - 125	2	20	
Beryllium	<0.00034		0.0500	0.0543		mg/L		109	75 - 125	3	20	
Boron	<0.021		0.100	0.106		mg/L		106	75 - 125	4	20	
Cadmium	<0.00034		0.0500	0.0522		mg/L		104	75 - 125	1	20	
Calcium	0.37		5.00	5.35		mg/L		100	75 - 125	3	20	
Chromium	<0.0011		0.0500	0.0527		mg/L		105	75 - 125	1	20	
Cobalt	0.0014	J	0.0500	0.0504		mg/L		98	75 - 125	0	20	
Lead	<0.00035		0.0500	0.0493		mg/L		99	75 - 125	1	20	
Lithium	<0.0032		0.0500	0.0553		mg/L		111	75 - 125	3	20	
Molybdenum	<0.00085		0.100	0.100		mg/L		100	75 - 125	0	20	
Selenium	<0.00024		0.0500	0.0514		mg/L		103	75 - 125	0	20	
Thallium	<0.000085		0.0100	0.0100		mg/L		100	75 - 125	0	20	
Nickel	<0.0018		0.0500	0.0524		mg/L		105	75 - 125	0	20	
Vanadium	0.0018	J	0.0500	0.0544		mg/L		105	75 - 125	4	20	
Silver	<0.00011		0.0500	0.0480		mg/L		96	75 - 125	2	20	
Copper	<0.0021		0.0500	0.0517		mg/L		103	75 - 125	1	20	
Zinc	<0.0065	^	0.0500	0.0517	^	mg/L		103	75 - 125	0	20	

Lab Sample ID: 400-132615-11 MS
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWC-20
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Antimony	<0.0010		0.0500	0.0513		mg/L		103	75 - 125	
Arsenic	0.00067	J	0.0500	0.0526		mg/L		104	75 - 125	
Barium	0.022		0.0500	0.0710		mg/L		99	75 - 125	
Beryllium	<0.00034		0.0500	0.0535		mg/L		107	75 - 125	
Boron	<0.021		0.100	0.102		mg/L		102	75 - 125	
Cadmium	<0.00034		0.0500	0.0521		mg/L		104	75 - 125	
Calcium	1.3		5.00	6.19		mg/L		97	75 - 125	
Chromium	<0.0011		0.0500	0.0531		mg/L		106	75 - 125	
Cobalt	0.0015	J	0.0500	0.0513		mg/L		99	75 - 125	

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-132615-11 MS
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWC-20
Prep Type: Total Recoverable
Prep Batch: 339094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lead	<0.00035		0.0500	0.0485		mg/L		97	75 - 125
Lithium	<0.0032		0.0500	0.0534		mg/L		107	75 - 125
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0502		mg/L		100	75 - 125
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125
Nickel	<0.0018		0.0500	0.0548		mg/L		110	75 - 125
Vanadium	0.011	B	0.0500	0.0580		mg/L		93	75 - 125
Silver	<0.00011		0.0500	0.0483		mg/L		97	75 - 125
Copper	<0.0021		0.0500	0.0525		mg/L		105	75 - 125
Zinc	<0.0065		0.0500	0.0570	^	mg/L		114	75 - 125

Lab Sample ID: 400-132615-11 MSD
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWC-20
Prep Type: Total Recoverable
Prep Batch: 339094

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	1	20
Arsenic	0.00067	J	0.0500	0.0515		mg/L		102	75 - 125	2	20
Barium	0.022		0.0500	0.0721		mg/L		101	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0538		mg/L		108	75 - 125	0	20
Boron	<0.021		0.100	0.103		mg/L		103	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	1	20
Calcium	1.3		5.00	6.12		mg/L		96	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0519		mg/L		104	75 - 125	2	20
Cobalt	0.0015	J	0.0500	0.0508		mg/L		98	75 - 125	1	20
Lead	<0.00035		0.0500	0.0495		mg/L		99	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0541		mg/L		108	75 - 125	1	20
Molybdenum	<0.00085		0.100	0.0998		mg/L		100	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0509		mg/L		102	75 - 125	1	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	2	20
Nickel	<0.0018		0.0500	0.0546		mg/L		109	75 - 125	0	20
Vanadium	0.011	B	0.0500	0.0569		mg/L		91	75 - 125	2	20
Silver	<0.00011		0.0500	0.0482		mg/L		96	75 - 125	0	20
Copper	<0.0021		0.0500	0.0520		mg/L		104	75 - 125	1	20
Zinc	<0.0065		0.0500	0.0561	^	mg/L		112	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-338713/14-A
Matrix: Water
Analysis Batch: 339118

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338713

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/17/17 09:54	01/19/17 14:49	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-1
SDG: Landfill #4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 400-338713/15-A
Matrix: Water
Analysis Batch: 339118

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00113		mg/L		113	80 - 120

Lab Sample ID: 400-132615-1 MS
Matrix: Water
Analysis Batch: 339118

Client Sample ID: GWC-1
Prep Type: Total/NA
Prep Batch: 338713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00230		mg/L		114	80 - 120

Lab Sample ID: 400-132615-1 MSD
Matrix: Water
Analysis Batch: 339118

Client Sample ID: GWC-1
Prep Type: Total/NA
Prep Batch: 338713

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00224		mg/L		111	80 - 120	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-338726/1
Matrix: Water
Analysis Batch: 338726

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			01/17/17 13:44	1

Lab Sample ID: LCS 400-338726/2
Matrix: Water
Analysis Batch: 338726

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	292		mg/L		100	78 - 122

Lab Sample ID: 400-132615-3 DU
Matrix: Water
Analysis Batch: 338726

Client Sample ID: GWC-12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	44		44.0		mg/L		0	5

Lab Sample ID: 400-132615-4 DU
Matrix: Water
Analysis Batch: 338726

Client Sample ID: GWC-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	84		84.0		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

Client Information

Client Contact:
 Joju Abraham

Sampler:

T. Payne *CP*; C. Hurdle *CP*; G. Jirak *CP*

Lab P/M:

Whitmore, Cheyenne R
 E-Mail: cheyenne.whitmore@testamericainc.com

Carrier Tracking Note(s):

COC No.:

Page:

1 of 1

Job #:

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

SSOW#:

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 - Landfill #4

Site:

CCR + State Permit

Analysis Requested

<input checked="" type="checkbox"/> Perform MS/MSD (Yes or No)	<input checked="" type="checkbox"/> Field Filtered Sample (Yes or No)	<input checked="" type="checkbox"/> TDS - SM 2540C; Cl, F, SO4 - EPA 300	<input checked="" type="checkbox"/> Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	<input checked="" type="checkbox"/> Metals State Permit (EPA 8020)	<input checked="" type="checkbox"/> Cu, Ni, Sb, Ag, V, Zn	<input checked="" type="checkbox"/> Total Number of Containers
--	---	--	---	--	---	--

Sample ID	Sample Date	Sample Time	Type (C=Comp, G=grab)	Preservation Code	I	D	D	D	D	Special Instructions/Note
GWC-1	1/12/17	09:12	G	GW	X	X	X	X	X	3
GWA-13	1/12/17	09:40	G	GW	X	X	X	X	X	3
GWC-12	1/12/17	10:35	G	GW	X	X	X	X	X	3
GWC-11	1/12/17	13:35	G	GW	X	X	X	X	X	3
GWC-21	1/12/17	15:00	G	GW	X	X	X	X	X	4
FB-1	1/12/17	14:05	G	W	X	X	X	X	X	3
FERB-1	1/12/17	14:20	G	W	X	X	X	X	X	3
DUP-2	1/12/17	-	G	GW	X	X	X	X	X	extra volume collected for radium analysis
GWC-10	1/12/17	12:48	G	GW	X	X	X	X	X	400-132615 Chain of Custody



Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact: Custody Seal No.:

Δ Yes Δ No

Sample Disposal (A fee may be assessed if samples are returned to TestAmerica within 1 month)

Return To Client Disposal By Lab Archive For _____ (month)

Special Instructions/QC Requirements:

680 -

Date/Time:

1/13/17 11:57

Received by:

[Signature] Company ERW

Date/Time:

1/13/17

Received by:

[Signature] Company JAW

Cooler Temperature(s) °C and Other Remarks:

1-1/17 14/14 1-1/17 8-7/2-7



TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE QUALITY OF YOUR BUSINESS. THE CARE OF OUR TESTERS.

Client Information
 Client Contact: T. Payne *267*; C. Hurdle *268*; G. Jirak *6, J.*
 Company: Joju 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: Plant McIntosh - Landfill #4
 Site: CCR + State Permit

Lab PM
 Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.co

Carrier Tracking No(s):
 COC No:
 Page: 1 of 1
 Job #:

Analysis Requested

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#:

Field Filtered Sample (Yes or No) **Perfor: MS/MSD (Yes or No)**
 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470
 Radium 226 & 228 - SW-846 9315 & 9320
 Metals State Permit (EPA 6020)
 Cu, Ni, Pb, Ag, V, Zn

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
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Type (C=Comp, G=grab)	Preservation Code	Total Number of Containers	Special Instructions/Note:
GWC-9	1/13/17	10:55	G	GW	3	
GWC-20	1/13/17	9:35	G	GW	3	
FB-2	1/13/17	8:15	G	GW	3	
FERB-2	1/13/17	8:30	G	GW	3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiologic

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 Mon

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: _____ Date/Time: 1/13/2017 11:57 Company: SAW
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Cooler Temperature(s) and Other Remarks: 1/13/17 1:47:00 1/17 27/2.7



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132615-1

SDG Number: Landfill #4

Login Number: 132615

List Number: 1

Creator: Kicklighter, Marilyn D

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	1.1°C, 1.4°C, 1.7°C, 2.7°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: 400-132615-1
SDG: Landfill #4

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132615-2

TestAmerica Sample Delivery Group: Landfill #4

Client Project/Site: CCR - Plant McIntosh

For:

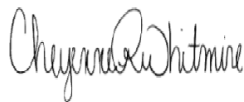
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/21/2017 5:57:32 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: 400-132615-2
SDG: Landfill #4

Job ID: 400-132615-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132615-2

RAD

Method(s) 903.0, 9315: Radium-226 Prep Batch 160-288740: The Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) spike recovery (154%, 143%) associated with the following samples are outside the upper QC limit of 137% indicating a potential positive bias for that analyte: FB-1 (400-132615-6), FERB-1 (400-132615-7), DUP-2 (400-132615-8), GWC-10 (400-132615-9), GWC-9 (400-132615-10), GWC-20 (400-132615-11), FB-2 (400-132615-12), FERB-2 (400-132615-13), (LCS 160-288740/2-A), (LCSD 160-288740/3-A) and (MB 160-288740/1-A). This analyte was not observed above the requested limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The data have been qualified and reported.

Method(s) 9315: Radium-226 Prep Batch 160-288725: The Laboratory Control Sample and Matrix Spike Duplicate (LCS/MSD) spike recoveries (142% and 145%) associated with the following samples are outside the upper QC limit of 137%/138% indicating a potential positive bias for that analyte: GWC-1 (400-132615-1), GWA-13 (400-132615-2), GWC-12 (400-132615-3), GWC-11 (400-132615-4), GWC-21 (400-132615-5), (LCS 160-288725/2-A), (MB 160-288725/1-A), (480-112259-A-5-D), (480-112259-A-5-E MS) and (480-112259-A-5-F MSD). This analyte was not observed above the requested limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The data have been qualified and reported.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-288749: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: FB-1 (400-132615-6), FERB-1 (400-132615-7), DUP-2 (400-132615-8), GWC-10 (400-132615-9), GWC-9 (400-132615-10), GWC-20 (400-132615-11), FB-2 (400-132615-12) and FERB-2 (400-132615-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-288740: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: FB-1 (400-132615-6), FERB-1 (400-132615-7), DUP-2 (400-132615-8), GWC-10 (400-132615-9), GWC-9 (400-132615-10), GWC-20 (400-132615-11), FB-2 (400-132615-12) and FERB-2 (400-132615-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132615-1	GWC-1	Water	01/12/17 09:12	01/13/17 11:57
400-132615-2	GWA-13	Water	01/12/17 09:40	01/13/17 11:57
400-132615-3	GWC-12	Water	01/12/17 10:35	01/13/17 11:57
400-132615-4	GWC-11	Water	01/12/17 13:35	01/13/17 11:57
400-132615-5	GWC-21	Water	01/12/17 15:00	01/13/17 11:57
400-132615-6	FB-1	Water	01/12/17 14:05	01/13/17 11:57
400-132615-7	FERB-1	Water	01/12/17 14:20	01/13/17 11:57
400-132615-8	DUP-2	Water	01/12/17 00:00	01/13/17 11:57
400-132615-9	GWC-10	Water	01/12/17 12:48	01/13/17 11:57
400-132615-10	GWC-9	Water	01/13/17 10:55	01/13/17 11:57
400-132615-11	GWC-20	Water	01/13/17 09:35	01/13/17 11:57
400-132615-12	FB-2	Water	01/13/17 08:15	01/13/17 11:57
400-132615-13	FERB-2	Water	01/13/17 08:30	01/13/17 11:57

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-1
Date Collected: 01/12/17 09:12
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-1
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	0.682	*	0.203	0.212	1.00	0.181	pCi/L	01/23/17 11:04	02/14/17 10:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					01/23/17 11:04	02/14/17 10:45	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.303	U	0.247	0.248	1.00	0.390	pCi/L	01/23/17 12:03	02/10/17 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					01/23/17 12:03	02/10/17 12:25	1
Y Carrier	86.0		40 - 110					01/23/17 12:03	02/10/17 12:25	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.985		0.320	0.327	5.00	0.390	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Client Sample ID: GWA-13

Date Collected: 01/12/17 09:40

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-2

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	0.475	*	0.170	0.175	1.00	0.165	pCi/L	01/23/17 11:04	02/14/17 10:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					01/23/17 11:04	02/14/17 10:45	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.270	0.272	1.00	0.435	pCi/L	01/23/17 12:03	02/10/17 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					01/23/17 12:03	02/10/17 12:25	1
Y Carrier	89.0		40 - 110					01/23/17 12:03	02/10/17 12:25	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.783		0.319	0.323	5.00	0.435	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Client Sample ID: GWC-12

Lab Sample ID: 400-132615-3

Date Collected: 01/12/17 10:35

Matrix: Water

Date Received: 01/13/17 11:57

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.198	*	0.119	0.121	1.00	0.156	pCi/L	01/23/17 11:04	02/14/17 10:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					01/23/17 11:04	02/14/17 10:45	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.276	U	0.230	0.231	1.00	0.365	pCi/L	01/23/17 12:03	02/10/17 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					01/23/17 12:03	02/10/17 12:25	1
Y Carrier	90.1		40 - 110					01/23/17 12:03	02/10/17 12:25	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.474		0.259	0.261	5.00	0.365	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-11
Date Collected: 01/12/17 13:35
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-4
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	0.0963	U *	0.0979	0.0983	1.00	0.151	pCi/L	01/23/17 11:04	02/14/17 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					01/23/17 11:04	02/14/17 13:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.578		0.268	0.273	1.00	0.385	pCi/L	01/23/17 12:03	02/10/17 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					01/23/17 12:03	02/10/17 12:25	1
Y Carrier	87.1		40 - 110					01/23/17 12:03	02/10/17 12:25	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.675		0.285	0.290	5.00	0.385	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-21
Date Collected: 01/12/17 15:00
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-5
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	0.219	*	0.134	0.136	1.00	0.177	pCi/L	01/23/17 11:04	02/14/17 13:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					01/23/17 11:04	02/14/17 13:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.125	U	0.211	0.211	1.00	0.358	pCi/L	01/23/17 12:03	02/10/17 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					01/23/17 12:03	02/10/17 12:25	1
Y Carrier	92.7		40 - 110					01/23/17 12:03	02/10/17 12:25	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.344	U	0.250	0.251	5.00	0.358	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: FB-1
Date Collected: 01/12/17 14:05
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0313	U *	0.0798	0.0799	1.00	0.150	pCi/L	01/23/17 12:04	02/14/17 22:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					01/23/17 12:04	02/14/17 22:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.176	U	0.276	0.277	1.00	0.464	pCi/L	01/23/17 13:21	02/10/17 16:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					01/23/17 13:21	02/10/17 16:19	1
Y Carrier	87.9		40 - 110					01/23/17 13:21	02/10/17 16:19	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	0.207	U	0.287	0.288	5.00	0.464	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: FERB-1

Lab Sample ID: 400-132615-7

Date Collected: 01/12/17 14:20

Matrix: Water

Date Received: 01/13/17 11:57

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00342	U *	0.0793	0.0793	1.00	0.166	pCi/L	01/23/17 12:04	02/14/17 22:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					01/23/17 12:04	02/14/17 22:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.333	U	0.288	0.290	1.00	0.462	pCi/L	01/23/17 13:21	02/10/17 16:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					01/23/17 13:21	02/10/17 16:19	1
Y Carrier	81.9		40 - 110					01/23/17 13:21	02/10/17 16:19	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	0.330	U	0.299	0.301	5.00	0.462	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: DUP-2

Date Collected: 01/12/17 00:00

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-8

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	0.124	U*	0.108	0.109	1.00	0.160	pCi/L	01/23/17 12:04	02/14/17 22:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					01/23/17 12:04	02/14/17 22:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.157	U	0.285	0.286	1.00	0.484	pCi/L	01/23/17 13:21	02/10/17 16:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					01/23/17 13:21	02/10/17 16:19	1
Y Carrier	84.9		40 - 110					01/23/17 13:21	02/10/17 16:19	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	0.281	U	0.305	0.306	5.00	0.484	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-10

Date Collected: 01/12/17 12:48

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-9

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	0.129	U *	0.110	0.110	1.00	0.161	pCi/L	01/23/17 12:04	02/14/17 22:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					01/23/17 12:04	02/14/17 22:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.259	U	0.287	0.288	1.00	0.471	pCi/L	01/23/17 13:21	02/10/17 16:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					01/23/17 13:21	02/10/17 16:19	1
Y Carrier	85.6		40 - 110					01/23/17 13:21	02/10/17 16:19	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	0.388	U	0.308	0.309	5.00	0.471	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-9
Date Collected: 01/13/17 10:55
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-10
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	0.457	*	0.167	0.172	1.00	0.170	pCi/L	01/23/17 12:04	02/14/17 22:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					01/23/17 12:04	02/14/17 22:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.123	U	0.277	0.277	1.00	0.474	pCi/L	01/23/17 13:21	02/10/17 16:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					01/23/17 13:21	02/10/17 16:19	1
Y Carrier	89.3		40 - 110					01/23/17 13:21	02/10/17 16:19	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	0.580		0.324	0.326	5.00	0.474	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-20

Lab Sample ID: 400-132615-11

Date Collected: 01/13/17 09:35

Matrix: Water

Date Received: 01/13/17 11:57

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.211	*	0.136	0.137	1.00	0.186	pCi/L	01/23/17 12:04	02/14/17 22:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					01/23/17 12:04	02/14/17 22:35	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.244	U	0.260	0.261	1.00	0.425	pCi/L	01/23/17 13:21	02/10/17 16:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					01/23/17 13:21	02/10/17 16:19	1
Y Carrier	87.1		40 - 110					01/23/17 13:21	02/10/17 16:19	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	0.455		0.293	0.295	5.00	0.425	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: FB-2
Date Collected: 01/13/17 08:15
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-12
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	0.0529	U *	0.0931	0.0932	1.00	0.164	pCi/L	01/23/17 12:04	02/14/17 22:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/23/17 12:04	02/14/17 22:35	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.195	U	0.263	0.264	1.00	0.439	pCi/L	01/23/17 13:21	02/10/17 16:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/23/17 13:21	02/10/17 16:20	1
Y Carrier	84.1		40 - 110					01/23/17 13:21	02/10/17 16:20	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	0.248	U	0.279	0.280	5.00	0.439	pCi/L		02/15/17 14:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: FERB-2

Lab Sample ID: 400-132615-13

Date Collected: 01/13/17 08:30

Matrix: Water

Date Received: 01/13/17 11:57

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0636	U *	0.0707	0.0710	1.00	0.181	pCi/L	01/23/17 12:04	02/14/17 22:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/23/17 12:04	02/14/17 22:36	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0193	U	0.250	0.250	1.00	0.444	pCi/L	01/23/17 13:21	02/10/17 16:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/23/17 13:21	02/10/17 16:20	1
Y Carrier	84.5		40 - 110					01/23/17 13:21	02/10/17 16:20	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	-0.0443	U	0.260	0.260	5.00	0.444	pCi/L		02/15/17 14:23	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-1
Date Collected: 01/12/17 09:12
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288725	01/23/17 11:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 10:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288739	01/23/17 12:03	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 12:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: GWA-13
Date Collected: 01/12/17 09:40
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288725	01/23/17 11:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 10:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288739	01/23/17 12:03	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 12:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: GWC-12
Date Collected: 01/12/17 10:35
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288725	01/23/17 11:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 10:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288739	01/23/17 12:03	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 12:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: GWC-11
Date Collected: 01/12/17 13:35
Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288725	01/23/17 11:04	AS	TAL SL
Total/NA	Analysis	9315		1	292220	02/14/17 13:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288739	01/23/17 12:03	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 12:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Client Sample ID: GWC-21

Lab Sample ID: 400-132615-5

Date Collected: 01/12/17 15:00

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288725	01/23/17 11:04	AS	TAL SL
Total/NA	Analysis	9315		1	292220	02/14/17 13:25	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288739	01/23/17 12:03	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 12:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-132615-6

Date Collected: 01/12/17 14:05

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 22:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-132615-7

Date Collected: 01/12/17 14:20

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 22:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: DUP-2

Lab Sample ID: 400-132615-8

Date Collected: 01/12/17 00:00

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 22:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Client Sample ID: GWC-10

Date Collected: 01/12/17 12:48

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 22:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: GWC-9

Date Collected: 01/13/17 10:55

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292221	02/14/17 22:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: GWC-20

Date Collected: 01/13/17 09:35

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292220	02/14/17 22:35	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Client Sample ID: FB-2

Date Collected: 01/13/17 08:15

Date Received: 01/13/17 11:57

Lab Sample ID: 400-132615-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292220	02/14/17 22:35	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Client Sample ID: FERB-2

Lab Sample ID: 400-132615-13

Date Collected: 01/13/17 08:30

Matrix: Water

Date Received: 01/13/17 11:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			288740	01/23/17 12:04	AS	TAL SL
Total/NA	Analysis	9315		1	292220	02/14/17 22:36	RTM	TAL SL
Total/NA	Prep	PrecSep_0			288749	01/23/17 13:21	AS	TAL SL
Total/NA	Analysis	9320		1	291926	02/10/17 16:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	292613	02/15/17 14:23	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: 400-132615-2
 SDG: Landfill #4

Rad

Prep Batch: 288725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total/NA	Water	PrecSep-21	
400-132615-2	GWA-13	Total/NA	Water	PrecSep-21	
400-132615-3	GWC-12	Total/NA	Water	PrecSep-21	
400-132615-4	GWC-11	Total/NA	Water	PrecSep-21	
400-132615-5	GWC-21	Total/NA	Water	PrecSep-21	
MB 160-288725/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-288725/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
480-112259-A-5-E MS	Matrix Spike	Total/NA	Water	PrecSep-21	
480-112259-A-5-F MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 288739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-1	GWC-1	Total/NA	Water	PrecSep_0	
400-132615-2	GWA-13	Total/NA	Water	PrecSep_0	
400-132615-3	GWC-12	Total/NA	Water	PrecSep_0	
400-132615-4	GWC-11	Total/NA	Water	PrecSep_0	
400-132615-5	GWC-21	Total/NA	Water	PrecSep_0	
MB 160-288739/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-288739/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
480-112259-A-5-H MS	Matrix Spike	Total/NA	Water	PrecSep_0	
480-112259-A-5-I MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 288740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-6	FB-1	Total/NA	Water	PrecSep-21	
400-132615-7	FERB-1	Total/NA	Water	PrecSep-21	
400-132615-8	DUP-2	Total/NA	Water	PrecSep-21	
400-132615-9	GWC-10	Total/NA	Water	PrecSep-21	
400-132615-10	GWC-9	Total/NA	Water	PrecSep-21	
400-132615-11	GWC-20	Total/NA	Water	PrecSep-21	
400-132615-12	FB-2	Total/NA	Water	PrecSep-21	
400-132615-13	FERB-2	Total/NA	Water	PrecSep-21	
MB 160-288740/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-288740/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-288740/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 288749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132615-6	FB-1	Total/NA	Water	PrecSep_0	
400-132615-7	FERB-1	Total/NA	Water	PrecSep_0	
400-132615-8	DUP-2	Total/NA	Water	PrecSep_0	
400-132615-9	GWC-10	Total/NA	Water	PrecSep_0	
400-132615-10	GWC-9	Total/NA	Water	PrecSep_0	
400-132615-11	GWC-20	Total/NA	Water	PrecSep_0	
400-132615-12	FB-2	Total/NA	Water	PrecSep_0	
400-132615-13	FERB-2	Total/NA	Water	PrecSep_0	
MB 160-288749/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-288749/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-288749/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-288725/1-A
Matrix: Water
Analysis Batch: 292221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288725

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.07232	U	0.0943	0.0946	1.00	0.157	pCi/L	01/23/17 11:04	02/14/17 10:44	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					01/23/17 11:04	02/14/17 10:44	1

Lab Sample ID: LCS 160-288725/2-A
Matrix: Water
Analysis Batch: 292221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288725

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									%Yield	Qualifier
Radium-226	6.01	8.535	*	1.01	1.00	0.160	pCi/L	142	68 - 137	
Carrier	LCS LCS		Limits							
Ba Carrier	79.8		40 - 110							

Lab Sample ID: 480-112259-A-5-E MS
Matrix: Water
Analysis Batch: 292220

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 288725

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
											%Yield	Qualifier
Radium-226	0.287	*	6.01	8.501		1.01	1.00	0.182	pCi/L	137	75 - 138	
Carrier	MS MS		Limits									
Ba Carrier	79.2		40 - 110									

Lab Sample ID: 480-112259-A-5-F MSD
Matrix: Water
Analysis Batch: 292220

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 288725

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
											%Yield	Qualifier	Limits	
Radium-226	0.287	*	6.00	8.987	F1	1.05	1.00	0.163	pCi/L	145	75 - 138	0.24	1	
Carrier	MSD MSD		Limits											
Ba Carrier	78.3		40 - 110											

Lab Sample ID: MB 160-288740/1-A
Matrix: Water
Analysis Batch: 292220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288740

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.01851	U	0.0851	0.0851	1.00	0.193	pCi/L	01/23/17 12:04	02/14/17 20:43	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-288740/1-A
Matrix: Water
Analysis Batch: 292220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288740

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	79.8		40 - 110

Prepared	Analyzed	Dil Fac
01/23/17 12:04	02/14/17 20:43	1

Lab Sample ID: LCS 160-288740/2-A
Matrix: Water
Analysis Batch: 292220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288740

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	9.240	*	1.08	1.00	0.169	pCi/L	154	68 - 137

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	74.9		40 - 110

Lab Sample ID: LCSD 160-288740/3-A
Matrix: Water
Analysis Batch: 292220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 288740

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	6.01	8.568	*	1.01	1.00	0.171	pCi/L	143	68 - 137	0.32	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	77.2		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-288739/1-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288739

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4369		0.250	0.253	1.00	0.376	pCi/L	01/23/17 12:03	02/10/17 12:24	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110	01/23/17 12:03	02/10/17 12:24	1
Y Carrier	88.2		40 - 110	01/23/17 12:03	02/10/17 12:24	1

Lab Sample ID: LCS 160-288739/2-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288739

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.9	16.38		1.75	1.00	0.366	pCi/L	118	56 - 140

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
SDG: Landfill #4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-288739/2-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288739

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	79.8		40 - 110
Y Carrier	89.3		40 - 110

Lab Sample ID: 480-112259-A-5-H MS
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 288739

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	0.193	U	13.9	17.24		1.82	1.00	0.413	pCi/L	124	45 - 150	

	MS	MS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	79.2		40 - 110
Y Carrier	91.2		40 - 110

Lab Sample ID: 480-112259-A-5-I MSD
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 288739

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
Radium-228	0.193	U	13.9	16.63		1.78	1.00	0.421	pCi/L	120	45 - 150	0.17	1	

	MSD	MSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	78.3		40 - 110
Y Carrier	88.6		40 - 110

Lab Sample ID: MB 160-288749/1-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288749

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared		Analyzed		Dil Fac
Radium-228	0.1469	U	0.257	0.258	1.00	0.437	pCi/L	01/23/17 13:21	02/10/17 16:17	16:17	1	

	MB	MB	Limits	Prepared		Analyzed		Dil Fac
Carrier	%Yield	Qualifier						
Ba Carrier	79.8		40 - 110	01/23/17 13:21	02/10/17 16:17	16:17	1	
Y Carrier	85.6		40 - 110	01/23/17 13:21	02/10/17 16:17	16:17	1	

Lab Sample ID: LCS 160-288749/2-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288749

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	13.9	16.20		1.77	1.00	0.430	pCi/L	117	56 - 140	

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132615-2
 SDG: Landfill #4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-288749/2-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288749

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	74.9		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: LCSD 160-288749/3-A
Matrix: Water
Analysis Batch: 291926

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 288749

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	
									56 - 140	RER	Limit	1
Radium-228	13.9	14.60		1.59	1.00	0.377	pCi/L	105	56 - 140	0.48		1

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	77.2		40 - 110
Y Carrier	96.4		40 - 110

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TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
NEW! 2017 Edition

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 - Landfill #4
 Site: CCR + State Permit

Sampler: T. Payne *CP*; C. Hurdle *CP*; G. Jirak *GJ*
 Lab P/M: Whitmire, Cheyenne R
 Carrier Tracking Note:
 E-Mail: cheyenne.whitmire@testamericainc.com

COC No:
 Page: 1 of 1
 Job #:

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, F, SO4 - EPA 300		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Metals State Permit (EPA 8020)		Cu, Ni, Sb, Ag, V, Zn		Total Number of Containers	Special Instructions/Note:	
					Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
GWC-1	1/12/17	09:12	G	GW															
GWA-13	1/12/17	09:40	G	GW															
GWC-12	1/12/17	10:35	G	GW															
GWC-11	1/12/17	13:35	G	GW															
GWC-21	1/12/17	15:00	G	GW															
FB-1	1/12/17	14:05	G	W															
FERB-1	1/12/17	14:20	G	W															
DUP-2	1/12/17	—	G	GW															
GWC-10	1/12/17	12:48	G	GW															



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: _____ Date: 1/12/2017 11:57
 Company: ERW

Relinquished by: _____ Date: _____
 Company: _____

Relinquished by: _____ Date: _____
 Company: _____

Custody Seals Intact: Custody Seal No.: _____
 Δ Yes Δ No

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ (month)

Method of Shipment: _____

Received by: _____ Date/Time: 1-13-17 11:57
 Company: JAW

Received by: _____ Date/Time: 1/13/17
 Company: _____

Received by: _____ Date/Time: _____
 Company: _____

Cooler Temperature(s) °C and Other Remarks: 1-11-17 14:04 1-11-17 8:7/2-7



TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 10000 W. Bay Blvd., Suite 100
 Jacksonville, FL 32217

2

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 - Landfill #4
 Site: CCR + State Permit

Sampler: T. Payne J.P.; C. Hurdle C.H.; G. Jirak G.J.
 Lab PM: Whitmire, Cheyenne R
 Carrier Tracking No(s):
 Page: 1 of 1
 Job #:

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#:

Sample Identification	Sample Date	Sample Time	Type (C=Comp G=grab)	Preservation Code	Analysis Requested										Special Instructions/Note:	
					Field Filtered Sample (Yes or No)	Perfor. MS/MSD (Yes or No)	TDS - SM 2540C : Cl,F,SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Metals State Permit (EPA 6020)	Cu, Ni, Sb, Ag, V, Zn	Total Number of Containers	Preservation Codes:			
GWC-9	1/13/17	10:55	G	GW	X	X	X	X	X	X	X	X	X	3		
GWC-20	1/13/17	9:35	G	GW	X	X	X	X	X	X	X	X	X	3		
FB-2	1/13/17	8:15	G	GW	X	X	X	X	X	X	X	X	X	3		
FERB-2	1/13/17	8:30	G	GW	X	X	X	X	X	X	X	X	X	3		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Unknown Radiologic
 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 Mon
 Special Instructions/QC Requirements:
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 1/13/2017 11:57 Company: SAW
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals intact: Custody Seal No.: _____
 Δ Yes Δ No



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132615-2

SDG Number: Landfill #4

Login Number: 132615

List Number: 1

Creator: Kicklighter, Marilyn D

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	1.1°C, 1.4°C, 1.7°C, 2.7°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: 400-132615-2
SDG: Landfill #4

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132615-2
SDG: Landfill #4

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	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: 400-132732-1

TestAmerica Sample Delivery Group: Landfill #4

Client Project/Site: CCR - Plant McIntosh

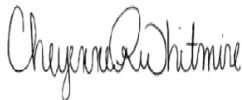
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:16:39 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: 400-132732-1
SDG: Landfill #4

Job ID: 400-132732-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132732-1

Metals

Method(s) 6020: The method blank for preparation batch 339177 and analytical batch 339365 contained Vanadium 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 ICSAB for batch 339365 was outside the acceptance limits for element: Zinc. The method blank (MB) and laboratory control spike (LCS) exhibit no matrix interferences and the data for these quality control samples have been qualified and reported.

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Detection Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
 SDG: Landfill #4

Client Sample ID: GWC-23

Lab Sample ID: 400-132732-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.6		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.64	J	1.3	0.46	ug/L	5		6020	Total Recoverable
Barium	49		2.5	0.49	ug/L	5		6020	Total Recoverable
Cobalt	5.7		2.5	0.40	ug/L	5		6020	Total Recoverable
Vanadium	0.0026	B	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	3000		250	130	ug/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-132732-2

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	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.67	J	1.3	0.46	ug/L	5		6020	Total Recoverable
Barium	14		2.5	0.49	ug/L	5		6020	Total Recoverable
Chromium	1.3	J	2.5	1.1	ug/L	5		6020	Total Recoverable
Nickel	0.0018	J	0.0025	0.0018	mg/L	5		6020	Total Recoverable
Vanadium	0.0067	B	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	8000		250	130	ug/L	5		6020	Total Recoverable
Total Dissolved Solids	12		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: 400-132732-1
SDG: Landfill #4

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: 400-132732-1
SDG: Landfill #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132732-1	GWC-23	Water	01/17/17 10:35	01/18/17 08:30
400-132732-2	GWC-19	Water	01/16/17 15:40	01/18/17 15:31

- 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: 400-132732-1
SDG: Landfill #4

Client Sample ID: GWC-23

Date Collected: 01/17/17 10:35

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132732-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		1.0	0.89	mg/L			01/21/17 02:47	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 03:21	1
Sulfate	2.6		1.0	0.70	mg/L			01/21/17 02:47	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.5	1.0	ug/L		01/20/17 09:40	01/20/17 19:19	5
Arsenic	0.64	J	1.3	0.46	ug/L		01/20/17 09:40	01/20/17 19:19	5
Barium	49		2.5	0.49	ug/L		01/20/17 09:40	01/20/17 19:19	5
Beryllium	<0.34		2.5	0.34	ug/L		01/20/17 09:40	01/20/17 19:19	5
Cadmium	<0.34		2.5	0.34	ug/L		01/20/17 09:40	01/20/17 19:19	5
Chromium	<1.1		2.5	1.1	ug/L		01/20/17 09:40	01/20/17 19:19	5
Cobalt	5.7		2.5	0.40	ug/L		01/20/17 09:40	01/20/17 19:19	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/20/17 09:40	01/20/17 19:19	5
Lead	<0.35		1.3	0.35	ug/L		01/20/17 09:40	01/20/17 19:19	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/20/17 09:40	01/20/17 19:19	5
Selenium	<0.24		1.3	0.24	ug/L		01/20/17 09:40	01/20/17 19:19	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/20/17 09:40	01/20/17 19:19	5
Thallium	<0.085		0.50	0.085	ug/L		01/20/17 09:40	01/20/17 19:19	5
Vanadium	0.0026	B	0.0025	0.0014	mg/L		01/20/17 09:40	01/20/17 19:19	5
Lithium	<3.2		5.0	3.2	ug/L		01/20/17 09:40	01/20/17 19:19	5
Calcium	3000		250	130	ug/L		01/20/17 09:40	01/20/17 19:19	5
Molybdenum	<0.85		15	0.85	ug/L		01/20/17 09:40	01/20/17 19:19	5
Boron	<21		50	21	ug/L		01/20/17 09:40	01/20/17 19:19	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/20/17 09:40	01/23/17 16:51	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 13:38	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: 400-132732-1
SDG: Landfill #4

Client Sample ID: GWC-19

Date Collected: 01/16/17 15:40

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132732-2

Matrix: Water

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			01/21/17 03:10	1
Fluoride	0.11	J	0.20	0.082	mg/L			01/27/17 03:44	1
Sulfate	2.1		1.0	0.70	mg/L			01/21/17 03:10	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.5	1.0	ug/L		01/20/17 09:40	01/20/17 20:04	5
Arsenic	0.67	J	1.3	0.46	ug/L		01/20/17 09:40	01/20/17 20:04	5
Barium	14		2.5	0.49	ug/L		01/20/17 09:40	01/20/17 20:04	5
Beryllium	<0.34		2.5	0.34	ug/L		01/20/17 09:40	01/20/17 20:04	5
Cadmium	<0.34		2.5	0.34	ug/L		01/20/17 09:40	01/20/17 20:04	5
Chromium	1.3	J	2.5	1.1	ug/L		01/20/17 09:40	01/20/17 20:04	5
Cobalt	<0.40		2.5	0.40	ug/L		01/20/17 09:40	01/20/17 20:04	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/20/17 09:40	01/20/17 20:04	5
Lead	<0.35		1.3	0.35	ug/L		01/20/17 09:40	01/20/17 20:04	5
Nickel	0.0018	J	0.0025	0.0018	mg/L		01/20/17 09:40	01/20/17 20:04	5
Selenium	<0.24		1.3	0.24	ug/L		01/20/17 09:40	01/20/17 20:04	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/20/17 09:40	01/20/17 20:04	5
Thallium	<0.085		0.50	0.085	ug/L		01/20/17 09:40	01/20/17 20:04	5
Vanadium	0.0067	B	0.0025	0.0014	mg/L		01/20/17 09:40	01/20/17 20:04	5
Lithium	<3.2		5.0	3.2	ug/L		01/20/17 09:40	01/20/17 20:04	5
Calcium	8000		250	130	ug/L		01/20/17 09:40	01/20/17 20:04	5
Molybdenum	<0.85		15	0.85	ug/L		01/20/17 09:40	01/20/17 20:04	5
Boron	<21		50	21	ug/L		01/20/17 09:40	01/20/17 20:04	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.0065		0.020	0.0065	mg/L		01/20/17 09:40	01/23/17 16:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			01/21/17 14:05	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
SDG: Landfill #4

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.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

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: 400-132732-1
SDG: Landfill #4

Client Sample ID: GWC-23

Date Collected: 01/17/17 10:35

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132732-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339378	01/21/17 02:47	KH1	TAL PEN
Total/NA	Analysis	300.0		1	340093	01/27/17 03:21	KH1	TAL PEN
Total Recoverable	Prep	3005A			339177	01/20/17 09:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 19:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339177	01/20/17 09:40	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	339519	01/23/17 16:51	DRE	TAL PEN
Total/NA	Prep	7470A			339034	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 13:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: GWC-19

Date Collected: 01/16/17 15:40

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132732-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339378	01/21/17 03:10	KH1	TAL PEN
Total/NA	Analysis	300.0		1	340093	01/27/17 03:44	KH1	TAL PEN
Total Recoverable	Prep	3005A			339177	01/20/17 09:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339365	01/20/17 20:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339177	01/20/17 09:40	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	339519	01/23/17 16:55	DRE	TAL PEN
Total/NA	Prep	7470A			339034	01/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339484	01/23/17 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	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: 400-132732-1
SDG: Landfill #4

HPLC/IC

Analysis Batch: 339378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	300.0	
400-132732-2	GWC-19	Total/NA	Water	300.0	
MB 400-339378/19	Method Blank	Total/NA	Water	300.0	
LCS 400-339378/20	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-339378/21	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 340093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	300.0	
400-132732-2	GWC-19	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	

Metals

Prep Batch: 339034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	7470A	
400-132732-2	GWC-19	Total/NA	Water	7470A	
MB 400-339034/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339034/15-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 339177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total Recoverable	Water	3005A	
400-132732-1 - RA	GWC-23	Total Recoverable	Water	3005A	
400-132732-2 - RA	GWC-19	Total Recoverable	Water	3005A	
400-132732-2	GWC-19	Total Recoverable	Water	3005A	
MB 400-339177/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339177/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132732-1 MS	GWC-23	Total Recoverable	Water	3005A	
400-132732-1 MSD	GWC-23	Total Recoverable	Water	3005A	

Analysis Batch: 339365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total Recoverable	Water	6020	339177
400-132732-2	GWC-19	Total Recoverable	Water	6020	339177
MB 400-339177/1-A ^5	Method Blank	Total Recoverable	Water	6020	339177
LCS 400-339177/2-A	Lab Control Sample	Total Recoverable	Water	6020	339177
400-132732-1 MS	GWC-23	Total Recoverable	Water	6020	339177
400-132732-1 MSD	GWC-23	Total Recoverable	Water	6020	339177

Analysis Batch: 339484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	7470A	339034
400-132732-2	GWC-19	Total/NA	Water	7470A	339034
MB 400-339034/14-A	Method Blank	Total/NA	Water	7470A	339034
LCS 400-339034/15-A	Lab Control Sample	Total/NA	Water	7470A	339034

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
SDG: Landfill #4

Metals (Continued)

Analysis Batch: 339519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1 - RA	GWC-23	Total Recoverable	Water	6020	339177
400-132732-2 - RA	GWC-19	Total Recoverable	Water	6020	339177

General Chemistry

Analysis Batch: 339296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	SM 2540C	
400-132732-2	GWC-19	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	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
SDG: Landfill #4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-339378/19
Matrix: Water
Analysis Batch: 339378

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			01/20/17 16:08	1
Fluoride	<0.082		0.20	0.082	mg/L			01/20/17 16:08	1
Sulfate	<0.70		1.0	0.70	mg/L			01/20/17 16:08	1

Lab Sample ID: LCS 400-339378/20
Matrix: Water
Analysis Batch: 339378

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	10.4		mg/L		104	90 - 110
Fluoride	10.0	9.45		mg/L		95	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

Lab Sample ID: LCSD 400-339378/21
Matrix: Water
Analysis Batch: 339378

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	10.3		mg/L		103	90 - 110	1	15
Fluoride	10.0	10.8		mg/L		108	90 - 110	13	15
Sulfate	10.0	10.5		mg/L		105	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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
SDG: Landfill #4

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339177/1-A ^5
Matrix: Water
Analysis Batch: 339365

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.5	1.0	ug/L		01/20/17 09:40	01/20/17 19:10	5
Arsenic	<0.46		1.3	0.46	ug/L		01/20/17 09:40	01/20/17 19:10	5
Barium	<0.49		2.5	0.49	ug/L		01/20/17 09:40	01/20/17 19:10	5
Beryllium	<0.34		2.5	0.34	ug/L		01/20/17 09:40	01/20/17 19:10	5
Cadmium	<0.34		2.5	0.34	ug/L		01/20/17 09:40	01/20/17 19:10	5
Chromium	<1.1		2.5	1.1	ug/L		01/20/17 09:40	01/20/17 19:10	5
Cobalt	<0.40		2.5	0.40	ug/L		01/20/17 09:40	01/20/17 19:10	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/20/17 09:40	01/20/17 19:10	5
Lead	<0.35		1.3	0.35	ug/L		01/20/17 09:40	01/20/17 19:10	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/20/17 09:40	01/20/17 19:10	5
Selenium	<0.24		1.3	0.24	ug/L		01/20/17 09:40	01/20/17 19:10	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/20/17 09:40	01/20/17 19:10	5
Thallium	<0.085		0.50	0.085	ug/L		01/20/17 09:40	01/20/17 19:10	5
Vanadium	0.00207	J	0.0025	0.0014	mg/L		01/20/17 09:40	01/20/17 19:10	5
Zinc	<0.0065	^	0.020	0.0065	mg/L		01/20/17 09:40	01/20/17 19:10	5
Lithium	<3.2		5.0	3.2	ug/L		01/20/17 09:40	01/20/17 19:10	5
Calcium	<130		250	130	ug/L		01/20/17 09:40	01/20/17 19:10	5
Molybdenum	<0.85		15	0.85	ug/L		01/20/17 09:40	01/20/17 19:10	5
Boron	<21		50	21	ug/L		01/20/17 09:40	01/20/17 19:10	5

Lab Sample ID: LCS 400-339177/2-A
Matrix: Water
Analysis Batch: 339365

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	50.8		ug/L		102	80 - 120
Arsenic	50.0	49.6		ug/L		99	80 - 120
Barium	50.0	49.0		ug/L		98	80 - 120
Beryllium	50.0	51.8		ug/L		104	80 - 120
Cadmium	50.0	49.4		ug/L		99	80 - 120
Chromium	50.0	50.4		ug/L		101	80 - 120
Cobalt	50.0	46.7		ug/L		93	80 - 120
Copper	0.0500	0.0491		mg/L		98	80 - 120
Lead	50.0	46.6		ug/L		93	80 - 120
Nickel	0.0500	0.0495		mg/L		99	80 - 120
Selenium	50.0	49.4		ug/L		99	80 - 120
Silver	0.0500	0.0485		mg/L		97	80 - 120
Thallium	10.0	9.72		ug/L		97	80 - 120
Vanadium	0.0500	0.0506		mg/L		101	80 - 120
Zinc	0.0500	0.0480	^	mg/L		96	80 - 120
Lithium	50.0	52.6		ug/L		105	80 - 120
Calcium	5000	4710		ug/L		94	80 - 120
Molybdenum	100	98.6		ug/L		99	80 - 120
Boron	100	95.4		ug/L		95	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
SDG: Landfill #4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-132732-1 MS
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWC-23
Prep Type: Total Recoverable
Prep Batch: 339177

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	%Rec.
Antimony	<1.0		50.0	51.7		ug/L		103	75 - 125	
Arsenic	<0.46		50.0	50.7		ug/L		101	75 - 125	
Barium	55		50.0	96.3		ug/L		84	75 - 125	
Beryllium	<0.34		50.0	51.3		ug/L		103	75 - 125	
Cadmium	<0.34		50.0	50.3		ug/L		101	75 - 125	
Chromium	<1.1		50.0	50.2		ug/L		100	75 - 125	
Cobalt	6.1		50.0	52.4		ug/L		93	75 - 125	
Copper	<0.0021		0.0500	0.0496		mg/L		99	75 - 125	
Lead	<0.35	^	50.0	46.4		ug/L		93	75 - 125	
Nickel	<0.0018		0.0500	0.0514		mg/L		103	75 - 125	
Selenium	<0.24		50.0	48.3		ug/L		97	75 - 125	
Silver	<0.00011		0.0500	0.0482		mg/L		96	75 - 125	
Thallium	<0.085		10.0	9.70		ug/L		97	75 - 125	
Vanadium	<0.0014		0.0500	0.0519		mg/L		104	75 - 125	
Lithium	<3.2		50.0	53.2		ug/L		106	75 - 125	
Calcium	3200	F1	5000	7660	F1	ug/L		153	75 - 125	
Molybdenum	<0.85		100	98.7		ug/L		99	75 - 125	
Boron	<21		100	119		ug/L		119	75 - 125	

Lab Sample ID: 400-132732-1 MSD
Matrix: Water
Analysis Batch: 339365

Client Sample ID: GWC-23
Prep Type: Total Recoverable
Prep Batch: 339177

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<1.0		50.0	50.5		ug/L		101	75 - 125	3	20
Arsenic	<0.46		50.0	50.6		ug/L		101	75 - 125	0	20
Barium	55		50.0	99.2		ug/L		89	75 - 125	3	20
Beryllium	<0.34		50.0	50.7		ug/L		101	75 - 125	1	20
Cadmium	<0.34		50.0	47.8		ug/L		96	75 - 125	5	20
Chromium	<1.1		50.0	49.8		ug/L		100	75 - 125	1	20
Cobalt	6.1		50.0	52.1		ug/L		92	75 - 125	1	20
Copper	<0.0021		0.0500	0.0490		mg/L		98	75 - 125	1	20
Lead	<0.35	^	50.0	47.2		ug/L		94	75 - 125	2	20
Nickel	<0.0018		0.0500	0.0508		mg/L		102	75 - 125	1	20
Selenium	<0.24		50.0	48.6		ug/L		97	75 - 125	1	20
Silver	<0.00011		0.0500	0.0480		mg/L		96	75 - 125	0	20
Thallium	<0.085		10.0	9.61		ug/L		96	75 - 125	1	20
Vanadium	<0.0014		0.0500	0.0533		mg/L		107	75 - 125	3	20
Lithium	<3.2		50.0	52.2		ug/L		104	75 - 125	2	20
Calcium	3200	F1	5000	7600	F1	ug/L		152	75 - 125	1	20
Molybdenum	<0.85		100	96.2		ug/L		96	75 - 125	3	20
Boron	<21		100	112		ug/L		112	75 - 125	6	20

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-1
 SDG: Landfill #4

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-339034/14-A
Matrix: Water
Analysis Batch: 339484

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339034

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/22/17 12:43	01/23/17 12:43	1

Lab Sample ID: LCS 400-339034/15-A
Matrix: Water
Analysis Batch: 339484

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339034
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00107		mg/L		106	80 - 120

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
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

1507-115002

Chain of Custody Record

3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2571

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 - Landfill #4 Site: CCR + State Permit		Lab Pkt: Whitmore, Chyenne R E-Mail: chyenne.whitmore@testamericainc.com Carrier Tracking No.6: _____ COC No: _____ Pages: 1 of 1 Job #: _____	
Analysis Requested Due Date Requested: _____ TAT Requested (days): _____ PO #: _____ WO #: _____ Project #: 0372382 SSOW#: _____		 400-132732 COC Total Number of Containers: 3	
Sample Identification Sample ID: GWC-23 Sample Date: 1/17/17 Sample Time: 1035 Sample Type (C-comp, G-grab): G Matrix (Water, Sludge, Dewatered, ETO/Thiourea, etc.): GW Preservation Code: G		Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No TDS - SM 2540C: Cl, F, SO4 - EPA 300: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Metals - (Part 257 Appendix II & IV) EPA 6020 & EPA 7470: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Radium 226 & 228 - SW-946 9315 & 9320: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Metals State Permit (EPA 6020): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other: _____	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) _____		Special Instructions/Note: 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 Requisitioned by: Requisitioned by: Chyenne Whitmore Requisitioned by: _____ Requisitioned by: _____		Method of Shipment: Date: 1-18-2017 Time: 8:30 Received by: [Signature] Company: SAW Date/Time: _____ Received by: _____ Company: _____ Date/Time: _____ Received by: _____ Company: _____	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cook Temperature (°C and Other Remarks): 8/101 0.90°C 400-132732	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132732-1

SDG Number: Landfill #4

Login Number: 132732

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, 1.10°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: 400-132732-1
SDG: Landfill #4

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132732-2

TestAmerica Sample Delivery Group: Landfill #4

Client Project/Site: CCR - Plant McIntosh

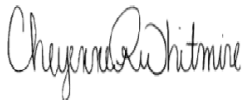
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:23:48 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: 400-132732-2
SDG: Landfill #4

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-2
SDG: Landfill #4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132732-1	GWC-23	Water	01/17/17 10:35	01/18/17 08:30
400-132732-2	GWC-19	Water	01/16/17 15:40	01/18/17 15:31

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Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-2
 SDG: Landfill #4

Client Sample ID: GWC-23

Date Collected: 01/17/17 10:35

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132732-1

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	0.307		0.162	0.164	1.00	0.190	pCi/L	01/25/17 13:20	02/18/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	58.1		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	0.390	U	0.402	0.404	1.00	0.655	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	58.1		40 - 110					01/25/17 15:22	02/14/17 13:06	1
Y Carrier	85.6		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	0.696		0.433	0.436	5.00	0.655	pCi/L		02/20/17 09:41	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-2
 SDG: Landfill #4

Client Sample ID: GWC-19

Date Collected: 01/16/17 15:40

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132732-2

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	0.113	U	0.101	0.102	1.00	0.151	pCi/L	01/25/17 13:20	02/18/17 10:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					01/25/17 13:20	02/18/17 10:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.258	U	0.247	0.248	1.00	0.398	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					01/25/17 15:22	02/14/17 13:06	1
Y Carrier	88.2		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	0.371	U	0.267	0.268	5.00	0.398	pCi/L		02/20/17 09:41	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-2
SDG: Landfill #4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-2
SDG: Landfill #4

Client Sample ID: GWC-23

Date Collected: 01/17/17 10:35

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132732-1

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	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: GWC-19

Date Collected: 01/16/17 15:40

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132732-2

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	293146	02/18/17 10:46	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: 400-132732-2
SDG: Landfill #4

Rad

Prep Batch: 289160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	PrecSep-21	
400-132732-2	GWC-19	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	

Prep Batch: 289179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-1	GWC-23	Total/NA	Water	PrecSep_0	
400-132732-2	GWC-19	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	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-132732-2
SDG: Landfill #4

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						

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

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						

1507-105002

Chain of Custody Record

3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2571

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 - Landfill #4 Site: CCR + State Permit		Lab Pkt: Whitmire, Chyenne R E-Mail: chyenne.whitmire@testamericainc.com Carrier Tracking No.67: COC No: Page: 1 of 1 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 - NH4SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - Acetic Acid P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCA W - ph 4-5 Z - other (specify)	
Sample Identification Sample ID: GWC-23 Sample Date: 1/17/17 Sample Time: 1035 Matrix: GW Sample Type: G-grab Preservation Code: G		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes TDS - SM 2540C : Cl, F, SO4 - EPA 300 Metals - Part 257 Appendix M & IV EPA 6020 & EPA 7470 Radium 226 & 228 - SW-946 9315 & 9320 Metals State Permit (EPA 6020) Total Number of Containers: 3	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Special Instructions/Note: 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: Empty Kit Reinquished by: Reinquished by: C.Hindle Reinquished by: <i>Cory Umsted</i> Reinquished by: Reinquished by:			
Method of Shipment: Date/Time: 1-18-2017 / 8:30 Date/Time: 1-18-17 / 830 Date/Time: Date/Time:			
Company: ERM Company: Company: Company:			
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No & Yes <input checked="" type="checkbox"/> No			

400-132732

8/10/17 8:30
 400-132732

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132732-2

SDG Number: Landfill #4

Login Number: 132732

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, 1.10°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: 400-132732-2
SDG: Landfill #4

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132732-2
SDG: Landfill #4

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	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: 400-134559-1

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

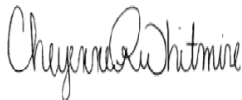
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/18/2017 2:06:02 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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www.testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Job ID: 400-134559-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-134559-1

HPLC/IC

Method(s) 300.0: The method blank for analytical batch 344724 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 344724 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 method blank for analytical batch 345054 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 345054 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.

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 344944 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: GWA-4R (400-134559-3), GWA-5 (400-134559-4), GWA-13 (400-134559-5), GWA-14 (400-134559-6), GWA-15 (400-134559-7), DUP-1 (400-134559-8), GWA-16 (400-134559-9), GWC-17 (400-134559-10), GWC-1 (400-134559-11), GWC-12 (400-134559-12), GWC-11 (400-134559-13), GWC-10 (400-134559-14), GWC-9 (400-134559-15), GWC-21 (400-134559-16), GWC-19 (400-134559-17), GWC-20 (400-134559-18), GWC-18 (400-134559-19), DUP-2 (400-134559-20), FB-1 (400-134559-21) and FERB-1 (400-134559-22).

Method(s) 6020: The laboratory control sample (LCS) for preparation batch 344598 and analytical batch 344944 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 344597 and 344652 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 method blank for preparation batch 344598 and analytical batch 345106 contained Molybdenum 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 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: GWA-2 (400-134559-1), GWA-3 (400-134559-2), FB-2 (400-134559-23), FERB-2 (400-134559-24) and GWC-23 (400-134559-25).

Method(s) 7470A: The method blank for prep batch 344229 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: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-2

Lab Sample ID: 400-134559-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.7		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	0.99	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.033		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	0.91		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0044		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.00014	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3

Lab Sample ID: 400-134559-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00061	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.76		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0040		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0066	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0027		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00016	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4R

Lab Sample ID: 400-134559-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.10	J B	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	0.0027		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0059	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: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-4R (Continued)

Lab Sample ID: 400-134559-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.0024		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0048		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.00014	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-134559-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00078	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0015	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0054		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-134559-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.097	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.26		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00075	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0049		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.00015	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-14

Lab Sample ID: 400-134559-6

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	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.47		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00051	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0047		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: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-14 (Continued)

Lab Sample ID: 400-134559-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000075	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-15

Lab Sample ID: 400-134559-7

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	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.37		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00061	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0051		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.00016	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-134559-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.49		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00059	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0045		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Mercury	0.000092	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-16

Lab Sample ID: 400-134559-9

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	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.38		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00066	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0052		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-17

Lab Sample ID: 400-134559-10

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-17 (Continued)

Lab Sample ID: 400-134559-10

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	0.22	B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00063	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00081	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Beryllium - RA	0.00066	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0067		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-134559-11

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
Fluoride	0.11	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.0		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.048		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0021	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0049		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-12

Lab Sample ID: 400-134559-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.61		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00079	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0055		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	8.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-134559-13

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	0.39	B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.5		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-11 (Continued)

Lab Sample ID: 400-134559-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00092	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0088		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0036	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-10

Lab Sample ID: 400-134559-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.25	B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	15		0.25	0.13	mg/L	5		6020	Total Recoverable
Boron - RA	0.052		0.050	0.021	mg/L	5		6020	Total Recoverable
Chromium - RA	0.010		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0043	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-134559-15

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	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.25		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00084	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0043		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	34		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-21

Lab Sample ID: 400-134559-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.10	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-21 (Continued)

Lab Sample ID: 400-134559-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	1.0		0.25	0.13	mg/L	5		6020	Total
Cobalt	0.0019	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0044		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-134559-17

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
Fluoride	0.18	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.9		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0056		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-20

Lab Sample ID: 400-134559-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.12	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0021	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0050		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-18

Lab Sample ID: 400-134559-19

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	0.61	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	0.00060	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Thallium	0.00011	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0065		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: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-18 (Continued)

Lab Sample ID: 400-134559-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-134559-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.048		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0021	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Chromium - RA	0.0046		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-134559-21

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 - RA	0.0044		0.0025	0.0011	mg/L	5		6020	Total Recoverable

Client Sample ID: FERB-1

Lab Sample ID: 400-134559-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.086	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Chromium - RA	0.0045		0.0025	0.0011	mg/L	5		6020	Total Recoverable

Client Sample ID: FB-2

Lab Sample ID: 400-134559-23

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	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.00092	J	0.015	0.00085	mg/L	5		6020	Total Recoverable

Client Sample ID: FERB-2

Lab Sample ID: 400-134559-24

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	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable

Client Sample ID: GWC-23

Lab Sample ID: 400-134559-25

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	0.12	J B	0.20	0.082	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Client Sample ID: GWC-23 (Continued)

Lab Sample ID: 400-134559-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	3.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.067		0.0025	0.00049	mg/L	5		6020	Total
Calcium	3.3		0.25	0.13	mg/L	5		6020	Total
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total
Cobalt	0.0095		0.0025	0.00040	mg/L	5		6020	Total
Total Dissolved Solids	38		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: 400-134559-1
SDG: Landfill 4

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: 400-134559-1
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134559-1	GWA-2	Water	02/28/17 10:10	03/02/17 09:06
400-134559-2	GWA-3	Water	02/28/17 10:25	03/02/17 09:06
400-134559-3	GWA-4R	Water	02/28/17 12:20	03/02/17 09:06
400-134559-4	GWA-5	Water	02/28/17 12:10	03/02/17 09:06
400-134559-5	GWA-13	Water	02/28/17 13:50	03/02/17 09:06
400-134559-6	GWA-14	Water	02/28/17 13:55	03/02/17 09:06
400-134559-7	GWA-15	Water	02/28/17 14:05	03/02/17 09:06
400-134559-8	DUP-1	Water	02/28/17 00:00	03/02/17 09:06
400-134559-9	GWA-16	Water	03/01/17 11:06	03/03/17 09:06
400-134559-10	GWC-17	Water	03/01/17 12:35	03/03/17 09:06
400-134559-11	GWC-1	Water	03/01/17 09:15	03/03/17 09:06
400-134559-12	GWC-12	Water	03/01/17 09:50	03/03/17 09:06
400-134559-13	GWC-11	Water	03/01/17 11:25	03/03/17 09:06
400-134559-14	GWC-10	Water	03/01/17 12:30	03/03/17 09:06
400-134559-15	GWC-9	Water	03/01/17 15:00	03/03/17 09:06
400-134559-16	GWC-21	Water	03/01/17 14:15	03/03/17 09:06
400-134559-17	GWC-19	Water	03/01/17 14:05	03/03/17 09:06
400-134559-18	GWC-20	Water	03/01/17 15:45	03/03/17 09:06
400-134559-19	GWC-18	Water	03/01/17 16:10	03/03/17 09:06
400-134559-20	DUP-2	Water	03/01/17 00:00	03/03/17 09:06
400-134559-21	FB-1	Water	03/01/17 10:48	03/03/17 09:06
400-134559-22	FERB-1	Water	03/01/17 10:55	03/03/17 09:06
400-134559-23	FB-2	Water	03/01/17 14:55	03/03/17 09:06
400-134559-24	FERB-2	Water	03/01/17 15:00	03/03/17 09:06
400-134559-25	GWC-23	Water	03/02/17 09:25	03/04/17 08:36

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-2
Date Collected: 02/28/17 10:10
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.7		1.0	0.89	mg/L			03/07/17 06:26	1
Fluoride	0.11	J B	0.20	0.082	mg/L			03/07/17 06:26	1
Sulfate	0.99	J	1.0	0.70	mg/L			03/07/17 06:26	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		03/06/17 10:55	03/08/17 16:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 16:32	5
Barium	0.033		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 16:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:32	5
Boron	0.022	J	0.050	0.021	mg/L		03/06/17 10:55	03/08/17 16:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:32	5
Calcium	0.91		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 16:32	5
Chromium	0.0044		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 16:32	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 16:32	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 16:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 16:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 16:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 16:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 16:32	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00014	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			03/04/17 15:03	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-3
Date Collected: 02/28/17 10:25
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.2		1.0	0.89	mg/L			03/07/17 07:35	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/07/17 07:35	1
Sulfate	1.1		1.0	0.70	mg/L			03/07/17 07:35	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 17:08	5
Arsenic	0.00061	J	0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 17:08	5
Barium	0.017		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 17:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 17:08	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 17:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 17:08	5
Calcium	0.76		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 17:08	5
Chromium	0.0040		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 17:08	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 17:08	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 17:08	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 17:08	5
Molybdenum	0.0066	J	0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 17:08	5
Selenium	0.0027		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 17:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 17:08	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00016	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			03/04/17 15:03	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-4R

Lab Sample ID: 400-134559-3

Date Collected: 02/28/17 12:20

Matrix: Water

Date Received: 03/02/17 09:06

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.3		1.0	0.89	mg/L			03/07/17 07:58	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/07/17 07:58	1
Sulfate	4.1		1.0	0.70	mg/L			03/07/17 07:58	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	F1 ^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 18:51	5
Arsenic	0.0027		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 18:51	5
Barium	0.021		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 18:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 18:51	5
Calcium	1.1		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 18:51	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 18:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 18:51	5
Molybdenum	0.0059	J	0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 18:51	5
Selenium	0.0024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 18:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 18:51	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 11:47	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 11:47	5
Chromium	0.0048		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 11:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 11:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00014	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			03/04/17 15:03	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-5
Date Collected: 02/28/17 12:10
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.3		1.0	0.89	mg/L			03/07/17 08:20	1
Fluoride	0.11	J B	0.20	0.082	mg/L			03/07/17 08:20	1
Sulfate	<0.70		1.0	0.70	mg/L			03/07/17 08:20	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		03/06/17 10:03	03/07/17 19:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:32	5
Barium	0.042		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:32	5
Calcium	2.7		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:32	5
Cobalt	0.00078	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:32	5
Molybdenum	0.0015	J	0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:32	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 11:56	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 11:56	5
Chromium	0.0054		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 11:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 11:56	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:52	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			03/04/17 15:03	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-13

Date Collected: 02/28/17 13:50

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			03/07/17 08:43	1
Fluoride	0.097	J B	0.20	0.082	mg/L			03/07/17 08:43	1
Sulfate	<0.70		1.0	0.70	mg/L			03/07/17 08:43	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 19:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:36	5
Barium	0.016		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:36	5
Calcium	0.26		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:36	5
Cobalt	0.00075	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:36	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:01	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:01	5
Chromium	0.0049		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:01	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		03/04/17 14:25	03/06/17 10:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			03/05/17 12:58	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-14

Date Collected: 02/28/17 13:55

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-6

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			03/07/17 09:52	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/07/17 09:52	1
Sulfate	1.1		1.0	0.70	mg/L			03/07/17 09:52	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		03/06/17 10:03	03/07/17 19:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:41	5
Barium	0.011		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:41	5
Calcium	0.47		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:41	5
Cobalt	0.00051	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:41	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:05	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:05	5
Chromium	0.0047		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:05	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000075	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			03/05/17 12:58	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-15

Date Collected: 02/28/17 14:05

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-7

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			03/07/17 10:14	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/07/17 10:14	1
Sulfate	<0.70		1.0	0.70	mg/L			03/07/17 10:14	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 19:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:45	5
Barium	0.023		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:45	5
Calcium	0.37		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:45	5
Cobalt	0.00061	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:45	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:10	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:10	5
Chromium	0.0051		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00016	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L			03/05/17 12:58	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: DUP-1

Date Collected: 02/28/17 00:00

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-8

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			03/07/17 10:37	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/07/17 10:37	1
Sulfate	1.1		1.0	0.70	mg/L			03/07/17 10:37	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 19:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:49	5
Barium	0.012		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:49	5
Calcium	0.49		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:49	5
Cobalt	0.00059	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:49	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:49	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:14	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:14	5
Chromium	0.0045		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:14	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000092	J B	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 11:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			03/04/17 15:03	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-16

Lab Sample ID: 400-134559-9

Date Collected: 03/01/17 11:06

Matrix: Water

Date Received: 03/03/17 09:06

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			03/07/17 11:00	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/07/17 11:00	1
Sulfate	<0.70		1.0	0.70	mg/L			03/07/17 11:00	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 19:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:54	5
Barium	0.022		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:54	5
Calcium	0.38		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:54	5
Cobalt	0.00066	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:54	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:19	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:19	5
Chromium	0.0052		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-17

Date Collected: 03/01/17 12:35

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-10

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			03/07/17 11:23	1
Fluoride	0.22	B	0.20	0.082	mg/L			03/07/17 11:23	1
Sulfate	1.3		1.0	0.70	mg/L			03/07/17 11:23	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		03/06/17 10:03	03/07/17 19:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 19:58	5
Barium	0.017		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 19:58	5
Cadmium	0.00063	J	0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 19:58	5
Calcium	2.1		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 19:58	5
Cobalt	0.00081	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 19:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 19:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 19:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 19:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 19:58	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.00066	J	0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:41	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:41	5
Chromium	0.0067		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:41	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		03/06/17 09:19	03/09/17 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-1
Date Collected: 03/01/17 09:15
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-11
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			03/07/17 11:46	1
Fluoride	0.11	J B	0.20	0.082	mg/L			03/07/17 11:46	1
Sulfate	2.0		1.0	0.70	mg/L			03/07/17 11:46	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 10:03	03/07/17 20:03	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:03	5
Barium	0.048		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:03	5
Calcium	2.7		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:03	5
Cobalt	0.0021	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:03	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:46	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:46	5
Chromium	0.0049		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:46	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-12

Date Collected: 03/01/17 09:50

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-12

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			03/07/17 14:38	1
Fluoride	0.11	J B	0.20	0.082	mg/L			03/07/17 14:38	1
Sulfate	<0.70		1.0	0.70	mg/L			03/07/17 14:38	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:08	5
Barium	0.011		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:08	5
Calcium	0.61		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:08	5
Cobalt	0.00079	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:50	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:50	5
Chromium	0.0055		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8.0		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-11

Date Collected: 03/01/17 11:25

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-13

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			03/07/17 15:01	1
Fluoride	0.39	B	0.20	0.082	mg/L			03/07/17 15:01	1
Sulfate	4.5		1.0	0.70	mg/L			03/07/17 15:01	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:30	5
Arsenic	0.00092	J	0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:30	5
Barium	0.011		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:30	5
Calcium	8.9		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:30	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:55	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:55	5
Chromium	0.0088		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:55	5
Lithium	0.0036	J	0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:55	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 09:19	03/09/17 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-10

Date Collected: 03/01/17 12:30

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-14

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.3		1.0	0.89	mg/L			03/07/17 15:24	1
Fluoride	0.25	B	0.20	0.082	mg/L			03/07/17 15:24	1
Sulfate	3.5		1.0	0.70	mg/L			03/07/17 15:24	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:35	5
Barium	0.017		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:35	5
Calcium	15		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:35	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 12:59	5
Boron	0.052		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 12:59	5
Chromium	0.010		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 12:59	5
Lithium	0.0043	J	0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 12:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-9
Date Collected: 03/01/17 15:00
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-15
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			03/08/17 03:57	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/08/17 03:57	1
Sulfate	1.5		1.0	0.70	mg/L			03/08/17 03:57	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		03/06/17 10:03	03/07/17 20:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:39	5
Barium	0.030		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:39	5
Calcium	0.25		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:39	5
Cobalt	0.00084	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:39	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:04	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:04	5
Chromium	0.0043		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:04	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 09:19	03/09/17 14:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-21
Date Collected: 03/01/17 14:15
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-16
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.9		1.0	0.89	mg/L			03/08/17 05:05	1
Fluoride	0.10	J B	0.20	0.082	mg/L			03/08/17 05:05	1
Sulfate	1.2		1.0	0.70	mg/L			03/08/17 05:05	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:44	5
Barium	0.015		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:44	5
Calcium	1.0		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:44	5
Cobalt	0.0019	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:44	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:08	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:08	5
Chromium	0.0044		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:08	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:08	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-19

Date Collected: 03/01/17 14:05

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-17

Matrix: Water

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			03/08/17 05:28	1
Fluoride	0.18	J B	0.20	0.082	mg/L			03/08/17 05:28	1
Sulfate	1.9		1.0	0.70	mg/L			03/08/17 05:28	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:48	5
Barium	0.017		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:48	5
Calcium	8.5		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:48	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:13	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:13	5
Chromium	0.0056		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:13	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-20

Date Collected: 03/01/17 15:45

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-18

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		1.0	0.89	mg/L			03/08/17 05:51	1
Fluoride	0.12	J B	0.20	0.082	mg/L			03/08/17 05:51	1
Sulfate	1.7		1.0	0.70	mg/L			03/08/17 05:51	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:53	5
Barium	0.021		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:53	5
Calcium	1.4		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:53	5
Cobalt	0.0021	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:53	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:17	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:17	5
Chromium	0.0050		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:17	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-18

Date Collected: 03/01/17 16:10

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-19

Matrix: Water

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			03/08/17 06:14	1
Fluoride	0.61	B	0.20	0.082	mg/L			03/08/17 06:14	1
Sulfate	4.6		1.0	0.70	mg/L			03/08/17 06:14	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 20:57	5
Arsenic	0.00060	J	0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 20:57	5
Barium	0.020		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 20:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 20:57	5
Calcium	16		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 20:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 20:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 20:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 20:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 20:57	5
Thallium	0.00011	J	0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 20:57	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:22	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:22	5
Chromium	0.0065		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: DUP-2

Date Collected: 03/01/17 00:00

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-20

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.3		1.0	0.89	mg/L			03/08/17 06:36	1
Fluoride	0.11	J B	0.20	0.082	mg/L			03/08/17 06:36	1
Sulfate	1.8		1.0	0.70	mg/L			03/08/17 06:36	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 21:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 21:01	5
Barium	0.048		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 21:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 21:01	5
Calcium	2.6		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 21:01	5
Cobalt	0.0021	J	0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 21:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 21:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 21:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 21:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 21:01	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:44	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:44	5
Chromium	0.0046		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:44	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		03/06/17 09:19	03/09/17 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: FB-1
Date Collected: 03/01/17 10:48
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-21
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			03/08/17 06:59	1
Fluoride	0.085	J B	0.20	0.082	mg/L			03/08/17 06:59	1
Sulfate	<0.70		1.0	0.70	mg/L			03/08/17 06:59	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 21:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 21:06	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 21:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 21:06	5
Calcium	<0.13		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 21:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 21:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 21:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 21:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 21:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 21:06	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:48	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:48	5
Chromium	0.0044		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: FERB-1

Lab Sample ID: 400-134559-22

Date Collected: 03/01/17 10:55

Matrix: Water

Date Received: 03/03/17 09:06

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			03/08/17 07:45	1
Fluoride	0.086	J B	0.20	0.082	mg/L			03/08/17 07:45	1
Sulfate	<0.70		1.0	0.70	mg/L			03/08/17 07:45	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/06/17 10:03	03/07/17 21:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 21:11	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 21:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 21:11	5
Calcium	<0.13		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 21:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 21:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 21:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 21:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 21:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:03	03/07/17 21:11	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 13:53	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 13:53	5
Chromium	0.0045		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 13:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 13:53	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		03/06/17 09:19	03/09/17 14:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: FB-2
Date Collected: 03/01/17 14:55
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-23
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/08/17 08:08	1
Fluoride	0.085	J B	0.20	0.082	mg/L			03/08/17 08:08	1
Sulfate	<0.70		1.0	0.70	mg/L			03/08/17 08:08	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/08/17 09:20	03/08/17 17:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/08/17 09:20	03/08/17 17:12	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/08/17 09:20	03/08/17 17:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 17:12	5
Boron	<0.021		0.050	0.021	mg/L		03/08/17 09:20	03/08/17 17:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 17:12	5
Calcium	<0.13		0.25	0.13	mg/L		03/08/17 09:20	03/08/17 17:12	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		03/08/17 09:20	03/08/17 17:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/08/17 09:20	03/08/17 17:12	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/08/17 09:20	03/08/17 17:12	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/08/17 09:20	03/08/17 17:12	5
Molybdenum	0.00092	J	0.015	0.00085	mg/L		03/08/17 09:20	03/08/17 17:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/08/17 09:20	03/08/17 17:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/08/17 09:20	03/08/17 17:12	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:30	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			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: FERB-2

Date Collected: 03/01/17 15:00

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-24

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			03/08/17 08:30	1
Fluoride	0.085	J B	0.20	0.082	mg/L			03/08/17 08:30	1
Sulfate	<0.70		1.0	0.70	mg/L			03/08/17 08:30	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/08/17 09:20	03/08/17 17:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/08/17 09:20	03/08/17 17:17	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/08/17 09:20	03/08/17 17:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 17:17	5
Boron	<0.021		0.050	0.021	mg/L		03/08/17 09:20	03/08/17 17:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 17:17	5
Calcium	<0.13		0.25	0.13	mg/L		03/08/17 09:20	03/08/17 17:17	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		03/08/17 09:20	03/08/17 17:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/08/17 09:20	03/08/17 17:17	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/08/17 09:20	03/08/17 17:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/08/17 09:20	03/08/17 17:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/08/17 09:20	03/08/17 17:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/08/17 09:20	03/08/17 17:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/08/17 09:20	03/08/17 17:17	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/05/17 13:51	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Client Sample ID: GWC-23
Date Collected: 03/02/17 09:25
Date Received: 03/04/17 08:36

Lab Sample ID: 400-134559-25
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			03/08/17 09:39	1
Fluoride	0.12	J B	0.20	0.082	mg/L			03/08/17 09:39	1
Sulfate	3.3		1.0	0.70	mg/L			03/08/17 09:39	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^ *	0.0025	0.0010	mg/L		03/08/17 09:20	03/08/17 17:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/08/17 09:20	03/08/17 17:21	5
Barium	0.067		0.0025	0.00049	mg/L		03/08/17 09:20	03/08/17 17:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 17:21	5
Boron	<0.021		0.050	0.021	mg/L		03/08/17 09:20	03/08/17 17:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 17:21	5
Calcium	3.3		0.25	0.13	mg/L		03/08/17 09:20	03/08/17 17:21	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		03/08/17 09:20	03/08/17 17:21	5
Cobalt	0.0095		0.0025	0.00040	mg/L		03/08/17 09:20	03/08/17 17:21	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/08/17 09:20	03/08/17 17:21	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/08/17 09:20	03/08/17 17:21	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/08/17 09:20	03/08/17 17:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/08/17 09:20	03/08/17 17:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/08/17 09:20	03/08/17 17:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:19	03/09/17 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			03/06/17 16:22	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

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.
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
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.
*	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.
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-2

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 06:26	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 16:32	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-3

Date Collected: 02/28/17 10:25

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 07:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 17:08	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-4R

Date Collected: 02/28/17 12:20

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 07:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 18:51	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 11:47	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-5

Date Collected: 02/28/17 12:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 08:20	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:32	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-5

Lab Sample ID: 400-134559-4

Date Collected: 02/28/17 12:10

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 11:56	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-13

Lab Sample ID: 400-134559-5

Date Collected: 02/28/17 13:50

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 08:43	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:36	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:01	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344546	03/05/17 12:58	RRC	TAL PEN

Client Sample ID: GWA-14

Lab Sample ID: 400-134559-6

Date Collected: 02/28/17 13:55

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 09:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:41	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:05	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344546	03/05/17 12:58	RRC	TAL PEN

Client Sample ID: GWA-15

Lab Sample ID: 400-134559-7

Date Collected: 02/28/17 14:05

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 10:14	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:45	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWA-15

Date Collected: 02/28/17 14:05

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:10	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 10:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344546	03/05/17 12:58	RRC	TAL PEN

Client Sample ID: DUP-1

Date Collected: 02/28/17 00:00

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 10:37	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:49	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:14	DRE	TAL PEN
Total/NA	Prep	7470A			344229	03/04/17 14:25	DN1	TAL PEN
Total/NA	Analysis	7470A		1	344641	03/06/17 11:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-16

Date Collected: 03/01/17 11:06

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 11:00	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:54	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:19	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 13:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-17

Date Collected: 03/01/17 12:35

Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 11:23	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 19:58	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-17

Lab Sample ID: 400-134559-10

Date Collected: 03/01/17 12:35

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:41	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-134559-11

Date Collected: 03/01/17 09:15

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 11:46	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:03	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:46	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-12

Lab Sample ID: 400-134559-12

Date Collected: 03/01/17 09:50

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 14:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:50	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-11

Lab Sample ID: 400-134559-13

Date Collected: 03/01/17 11:25

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 15:01	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:30	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-11

Lab Sample ID: 400-134559-13

Date Collected: 03/01/17 11:25

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:55	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-10

Lab Sample ID: 400-134559-14

Date Collected: 03/01/17 12:30

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344724	03/07/17 15:24	TAJ	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:35	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 12:59	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-9

Lab Sample ID: 400-134559-15

Date Collected: 03/01/17 15:00

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 03:57	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:04	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-21

Lab Sample ID: 400-134559-16

Date Collected: 03/01/17 14:15

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 05:05	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:44	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-21

Lab Sample ID: 400-134559-16

Date Collected: 03/01/17 14:15

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:08	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-19

Lab Sample ID: 400-134559-17

Date Collected: 03/01/17 14:05

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 05:28	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:48	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:13	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-20

Lab Sample ID: 400-134559-18

Date Collected: 03/01/17 15:45

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 05:51	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:17	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-18

Lab Sample ID: 400-134559-19

Date Collected: 03/01/17 16:10

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 06:14	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 20:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: GWC-18

Lab Sample ID: 400-134559-19

Date Collected: 03/01/17 16:10

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:22	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: DUP-2

Lab Sample ID: 400-134559-20

Date Collected: 03/01/17 00:00

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 06:36	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 21:01	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:44	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-134559-21

Date Collected: 03/01/17 10:48

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 06:59	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 21:06	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:48	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-134559-22

Date Collected: 03/01/17 10:55

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 07:45	KH1	TAL PEN
Total Recoverable	Prep	3005A			344598	03/06/17 10:03	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344944	03/07/17 21:11	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344598	03/06/17 10:03	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Client Sample ID: FERB-1

Lab Sample ID: 400-134559-22

Date Collected: 03/01/17 10:55

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	345106	03/08/17 13:53	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: FB-2

Lab Sample ID: 400-134559-23

Date Collected: 03/01/17 14:55

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 08:08	KH1	TAL PEN
Total Recoverable	Prep	3005A			344652	03/08/17 09:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 17:12	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: FERB-2

Lab Sample ID: 400-134559-24

Date Collected: 03/01/17 15:00

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345054	03/08/17 08:30	KH1	TAL PEN
Total Recoverable	Prep	3005A			344652	03/08/17 09:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 17:17	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344550	03/05/17 13:51	RRC	TAL PEN

Client Sample ID: GWC-23

Lab Sample ID: 400-134559-25

Date Collected: 03/02/17 09:25

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	345054	03/08/17 09:39	KH1	TAL PEN
Total Recoverable	Prep	3005A			344652	03/08/17 09:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 17:21	DRE	TAL PEN
Total/NA	Prep	7470A			344588	03/06/17 09:19	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345180	03/09/17 14:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344648	03/06/17 16:22	TET	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: 400-134559-1
SDG: Landfill 4

HPLC/IC

Analysis Batch: 344724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total/NA	Water	300.0	
400-134559-2	GWA-3	Total/NA	Water	300.0	
400-134559-3	GWA-4R	Total/NA	Water	300.0	
400-134559-4	GWA-5	Total/NA	Water	300.0	
400-134559-5	GWA-13	Total/NA	Water	300.0	
400-134559-6	GWA-14	Total/NA	Water	300.0	
400-134559-7	GWA-15	Total/NA	Water	300.0	
400-134559-8	DUP-1	Total/NA	Water	300.0	
400-134559-9	GWA-16	Total/NA	Water	300.0	
400-134559-10	GWC-17	Total/NA	Water	300.0	
400-134559-11	GWC-1	Total/NA	Water	300.0	
400-134559-12	GWC-12	Total/NA	Water	300.0	
400-134559-13	GWC-11	Total/NA	Water	300.0	
400-134559-14	GWC-10	Total/NA	Water	300.0	
MB 400-344724/4	Method Blank	Total/NA	Water	300.0	
LCS 400-344724/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-344724/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134559-1 MS	GWA-2	Total/NA	Water	300.0	
400-134559-1 MSD	GWA-2	Total/NA	Water	300.0	

Analysis Batch: 345054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-15	GWC-9	Total/NA	Water	300.0	
400-134559-16	GWC-21	Total/NA	Water	300.0	
400-134559-17	GWC-19	Total/NA	Water	300.0	
400-134559-18	GWC-20	Total/NA	Water	300.0	
400-134559-19	GWC-18	Total/NA	Water	300.0	
400-134559-20	DUP-2	Total/NA	Water	300.0	
400-134559-21	FB-1	Total/NA	Water	300.0	
400-134559-22	FERB-1	Total/NA	Water	300.0	
400-134559-23	FB-2	Total/NA	Water	300.0	
400-134559-24	FERB-2	Total/NA	Water	300.0	
400-134559-25	GWC-23	Total/NA	Water	300.0	
MB 400-345054/4	Method Blank	Total/NA	Water	300.0	
LCS 400-345054/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-345054/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134525-H-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-134525-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 344229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total/NA	Water	7470A	
400-134559-2	GWA-3	Total/NA	Water	7470A	
400-134559-3	GWA-4R	Total/NA	Water	7470A	
400-134559-4	GWA-5	Total/NA	Water	7470A	
400-134559-5	GWA-13	Total/NA	Water	7470A	
400-134559-6	GWA-14	Total/NA	Water	7470A	
400-134559-7	GWA-15	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Metals (Continued)

Prep Batch: 344229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-8	DUP-1	Total/NA	Water	7470A	
MB 400-344229/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-344229/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-134517-D-4-B MS	Matrix Spike	Total/NA	Water	7470A	
400-134517-D-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 344588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-9	GWA-16	Total/NA	Water	7470A	
400-134559-10	GWC-17	Total/NA	Water	7470A	
400-134559-11	GWC-1	Total/NA	Water	7470A	
400-134559-12	GWC-12	Total/NA	Water	7470A	
400-134559-13	GWC-11	Total/NA	Water	7470A	
400-134559-14	GWC-10	Total/NA	Water	7470A	
400-134559-15	GWC-9	Total/NA	Water	7470A	
400-134559-16	GWC-21	Total/NA	Water	7470A	
400-134559-17	GWC-19	Total/NA	Water	7470A	
400-134559-18	GWC-20	Total/NA	Water	7470A	
400-134559-19	GWC-18	Total/NA	Water	7470A	
400-134559-20	DUP-2	Total/NA	Water	7470A	
400-134559-21	FB-1	Total/NA	Water	7470A	
400-134559-22	FERB-1	Total/NA	Water	7470A	
400-134559-23	FB-2	Total/NA	Water	7470A	
400-134559-24	FERB-2	Total/NA	Water	7470A	
400-134559-25	GWC-23	Total/NA	Water	7470A	
MB 400-344588/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-344588/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-134559-9 MS	GWA-16	Total/NA	Water	7470A	
400-134559-9 MSD	GWA-16	Total/NA	Water	7470A	

Prep Batch: 344597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total Recoverable	Water	3005A	
400-134559-2	GWA-3	Total Recoverable	Water	3005A	
MB 400-344597/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-344597/2-A	Lab Control Sample	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	

Prep Batch: 344598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-3 - RA	GWA-4R	Total Recoverable	Water	3005A	
400-134559-3	GWA-4R	Total Recoverable	Water	3005A	
400-134559-4 - RA	GWA-5	Total Recoverable	Water	3005A	
400-134559-4	GWA-5	Total Recoverable	Water	3005A	
400-134559-5 - RA	GWA-13	Total Recoverable	Water	3005A	
400-134559-5	GWA-13	Total Recoverable	Water	3005A	
400-134559-6	GWA-14	Total Recoverable	Water	3005A	
400-134559-6 - RA	GWA-14	Total Recoverable	Water	3005A	
400-134559-7 - RA	GWA-15	Total Recoverable	Water	3005A	
400-134559-7	GWA-15	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Metals (Continued)

Prep Batch: 344598 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-8	DUP-1	Total Recoverable	Water	3005A	
400-134559-8 - RA	DUP-1	Total Recoverable	Water	3005A	
400-134559-9 - RA	GWA-16	Total Recoverable	Water	3005A	
400-134559-9	GWA-16	Total Recoverable	Water	3005A	
400-134559-10 - RA	GWC-17	Total Recoverable	Water	3005A	
400-134559-10	GWC-17	Total Recoverable	Water	3005A	
400-134559-11	GWC-1	Total Recoverable	Water	3005A	
400-134559-11 - RA	GWC-1	Total Recoverable	Water	3005A	
400-134559-12 - RA	GWC-12	Total Recoverable	Water	3005A	
400-134559-12	GWC-12	Total Recoverable	Water	3005A	
400-134559-13	GWC-11	Total Recoverable	Water	3005A	
400-134559-13 - RA	GWC-11	Total Recoverable	Water	3005A	
400-134559-14	GWC-10	Total Recoverable	Water	3005A	
400-134559-14 - RA	GWC-10	Total Recoverable	Water	3005A	
400-134559-15	GWC-9	Total Recoverable	Water	3005A	
400-134559-15 - RA	GWC-9	Total Recoverable	Water	3005A	
400-134559-16 - RA	GWC-21	Total Recoverable	Water	3005A	
400-134559-16	GWC-21	Total Recoverable	Water	3005A	
400-134559-17	GWC-19	Total Recoverable	Water	3005A	
400-134559-17 - RA	GWC-19	Total Recoverable	Water	3005A	
400-134559-18	GWC-20	Total Recoverable	Water	3005A	
400-134559-18 - RA	GWC-20	Total Recoverable	Water	3005A	
400-134559-19	GWC-18	Total Recoverable	Water	3005A	
400-134559-19 - RA	GWC-18	Total Recoverable	Water	3005A	
400-134559-20 - RA	DUP-2	Total Recoverable	Water	3005A	
400-134559-20	DUP-2	Total Recoverable	Water	3005A	
400-134559-21 - RA	FB-1	Total Recoverable	Water	3005A	
400-134559-21	FB-1	Total Recoverable	Water	3005A	
400-134559-22 - RA	FERB-1	Total Recoverable	Water	3005A	
400-134559-22	FERB-1	Total Recoverable	Water	3005A	
MB 400-344598/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
MB 400-344598/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-344598/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-344598/2-A - RA	Lab Control Sample	Total Recoverable	Water	3005A	
400-134559-3 MS	GWA-4R	Total Recoverable	Water	3005A	
400-134559-3 MSD	GWA-4R	Total Recoverable	Water	3005A	

Analysis Batch: 344641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total/NA	Water	7470A	344229
400-134559-2	GWA-3	Total/NA	Water	7470A	344229
400-134559-3	GWA-4R	Total/NA	Water	7470A	344229
400-134559-4	GWA-5	Total/NA	Water	7470A	344229
400-134559-5	GWA-13	Total/NA	Water	7470A	344229
400-134559-6	GWA-14	Total/NA	Water	7470A	344229
400-134559-7	GWA-15	Total/NA	Water	7470A	344229
400-134559-8	DUP-1	Total/NA	Water	7470A	344229
MB 400-344229/14-A	Method Blank	Total/NA	Water	7470A	344229
LCS 400-344229/15-A	Lab Control Sample	Total/NA	Water	7470A	344229
400-134517-D-4-B MS	Matrix Spike	Total/NA	Water	7470A	344229
400-134517-D-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	344229

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Prep Batch: 344652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-23	FB-2	Total Recoverable	Water	3005A	
400-134559-24	FERB-2	Total Recoverable	Water	3005A	
400-134559-25	GWC-23	Total Recoverable	Water	3005A	
MB 400-344652/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-344652/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-134749-H-2-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-134749-H-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 344944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-3	GWA-4R	Total Recoverable	Water	6020	344598
400-134559-4	GWA-5	Total Recoverable	Water	6020	344598
400-134559-5	GWA-13	Total Recoverable	Water	6020	344598
400-134559-6	GWA-14	Total Recoverable	Water	6020	344598
400-134559-7	GWA-15	Total Recoverable	Water	6020	344598
400-134559-8	DUP-1	Total Recoverable	Water	6020	344598
400-134559-9	GWA-16	Total Recoverable	Water	6020	344598
400-134559-10	GWC-17	Total Recoverable	Water	6020	344598
400-134559-11	GWC-1	Total Recoverable	Water	6020	344598
400-134559-12	GWC-12	Total Recoverable	Water	6020	344598
400-134559-13	GWC-11	Total Recoverable	Water	6020	344598
400-134559-14	GWC-10	Total Recoverable	Water	6020	344598
400-134559-15	GWC-9	Total Recoverable	Water	6020	344598
400-134559-16	GWC-21	Total Recoverable	Water	6020	344598
400-134559-17	GWC-19	Total Recoverable	Water	6020	344598
400-134559-18	GWC-20	Total Recoverable	Water	6020	344598
400-134559-19	GWC-18	Total Recoverable	Water	6020	344598
400-134559-20	DUP-2	Total Recoverable	Water	6020	344598
400-134559-21	FB-1	Total Recoverable	Water	6020	344598
400-134559-22	FERB-1	Total Recoverable	Water	6020	344598
MB 400-344598/1-A ^5	Method Blank	Total Recoverable	Water	6020	344598
LCS 400-344598/2-A	Lab Control Sample	Total Recoverable	Water	6020	344598
400-134559-3 MS	GWA-4R	Total Recoverable	Water	6020	344598
400-134559-3 MSD	GWA-4R	Total Recoverable	Water	6020	344598

Analysis Batch: 345106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total Recoverable	Water	6020	344597
400-134559-2	GWA-3	Total Recoverable	Water	6020	344597
400-134559-3 - RA	GWA-4R	Total Recoverable	Water	6020	344598
400-134559-4 - RA	GWA-5	Total Recoverable	Water	6020	344598
400-134559-5 - RA	GWA-13	Total Recoverable	Water	6020	344598
400-134559-6 - RA	GWA-14	Total Recoverable	Water	6020	344598
400-134559-7 - RA	GWA-15	Total Recoverable	Water	6020	344598
400-134559-8 - RA	DUP-1	Total Recoverable	Water	6020	344598
400-134559-9 - RA	GWA-16	Total Recoverable	Water	6020	344598
400-134559-10 - RA	GWC-17	Total Recoverable	Water	6020	344598
400-134559-11 - RA	GWC-1	Total Recoverable	Water	6020	344598
400-134559-12 - RA	GWC-12	Total Recoverable	Water	6020	344598
400-134559-13 - RA	GWC-11	Total Recoverable	Water	6020	344598
400-134559-14 - RA	GWC-10	Total Recoverable	Water	6020	344598
400-134559-15 - RA	GWC-9	Total Recoverable	Water	6020	344598
400-134559-16 - RA	GWC-21	Total Recoverable	Water	6020	344598

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Metals (Continued)

Analysis Batch: 345106 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-17 - RA	GWC-19	Total Recoverable	Water	6020	344598
400-134559-18 - RA	GWC-20	Total Recoverable	Water	6020	344598
400-134559-19 - RA	GWC-18	Total Recoverable	Water	6020	344598
400-134559-20 - RA	DUP-2	Total Recoverable	Water	6020	344598
400-134559-21 - RA	FB-1	Total Recoverable	Water	6020	344598
400-134559-22 - RA	FERB-1	Total Recoverable	Water	6020	344598
400-134559-23	FB-2	Total Recoverable	Water	6020	344652
400-134559-24	FERB-2	Total Recoverable	Water	6020	344652
400-134559-25	GWC-23	Total Recoverable	Water	6020	344652
MB 400-344597/1-A ^5	Method Blank	Total Recoverable	Water	6020	344597
MB 400-344598/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	344598
MB 400-344652/1-A ^5	Method Blank	Total Recoverable	Water	6020	344652
LCS 400-344597/2-A	Lab Control Sample	Total Recoverable	Water	6020	344597
LCS 400-344598/2-A - RA	Lab Control Sample	Total Recoverable	Water	6020	344598
LCS 400-344652/2-A	Lab Control Sample	Total Recoverable	Water	6020	344652
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
400-134749-H-2-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	344652
400-134749-H-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	344652

Analysis Batch: 345180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-9	GWA-16	Total/NA	Water	7470A	344588
400-134559-10	GWC-17	Total/NA	Water	7470A	344588
400-134559-11	GWC-1	Total/NA	Water	7470A	344588
400-134559-12	GWC-12	Total/NA	Water	7470A	344588
400-134559-13	GWC-11	Total/NA	Water	7470A	344588
400-134559-14	GWC-10	Total/NA	Water	7470A	344588
400-134559-15	GWC-9	Total/NA	Water	7470A	344588
400-134559-16	GWC-21	Total/NA	Water	7470A	344588
400-134559-17	GWC-19	Total/NA	Water	7470A	344588
400-134559-18	GWC-20	Total/NA	Water	7470A	344588
400-134559-19	GWC-18	Total/NA	Water	7470A	344588
400-134559-20	DUP-2	Total/NA	Water	7470A	344588
400-134559-21	FB-1	Total/NA	Water	7470A	344588
400-134559-22	FERB-1	Total/NA	Water	7470A	344588
400-134559-23	FB-2	Total/NA	Water	7470A	344588
400-134559-24	FERB-2	Total/NA	Water	7470A	344588
400-134559-25	GWC-23	Total/NA	Water	7470A	344588
MB 400-344588/14-A	Method Blank	Total/NA	Water	7470A	344588
LCS 400-344588/15-A	Lab Control Sample	Total/NA	Water	7470A	344588
400-134559-9 MS	GWA-16	Total/NA	Water	7470A	344588
400-134559-9 MSD	GWA-16	Total/NA	Water	7470A	344588

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
LCS 400-344598/2-A	Lab Control Sample	Total Recoverable	Water	6020	344598

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

General Chemistry

Analysis Batch: 344530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total/NA	Water	SM 2540C	
400-134559-2	GWA-3	Total/NA	Water	SM 2540C	
400-134559-3	GWA-4R	Total/NA	Water	SM 2540C	
400-134559-4	GWA-5	Total/NA	Water	SM 2540C	
400-134559-8	DUP-1	Total/NA	Water	SM 2540C	
MB 400-344530/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-344530/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134525-G-4 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 344546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-5	GWA-13	Total/NA	Water	SM 2540C	
400-134559-6	GWA-14	Total/NA	Water	SM 2540C	
400-134559-7	GWA-15	Total/NA	Water	SM 2540C	
MB 400-344546/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-344546/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134634-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 344550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-9	GWA-16	Total/NA	Water	SM 2540C	
400-134559-10	GWC-17	Total/NA	Water	SM 2540C	
400-134559-11	GWC-1	Total/NA	Water	SM 2540C	
400-134559-12	GWC-12	Total/NA	Water	SM 2540C	
400-134559-13	GWC-11	Total/NA	Water	SM 2540C	
400-134559-14	GWC-10	Total/NA	Water	SM 2540C	
400-134559-15	GWC-9	Total/NA	Water	SM 2540C	
400-134559-16	GWC-21	Total/NA	Water	SM 2540C	
400-134559-17	GWC-19	Total/NA	Water	SM 2540C	
400-134559-18	GWC-20	Total/NA	Water	SM 2540C	
400-134559-19	GWC-18	Total/NA	Water	SM 2540C	
400-134559-20	DUP-2	Total/NA	Water	SM 2540C	
400-134559-21	FB-1	Total/NA	Water	SM 2540C	
400-134559-22	FERB-1	Total/NA	Water	SM 2540C	
400-134559-23	FB-2	Total/NA	Water	SM 2540C	
400-134559-24	FERB-2	Total/NA	Water	SM 2540C	
MB 400-344550/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-344550/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134559-9 DU	GWA-16	Total/NA	Water	SM 2540C	
400-134559-18 DU	GWC-20	Total/NA	Water	SM 2540C	

Analysis Batch: 344648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-25	GWC-23	Total/NA	Water	SM 2540C	
MB 400-344648/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-344648/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134559-25 DU	GWC-23	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-344724/4
Matrix: Water
Analysis Batch: 344724

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			03/07/17 05:18	1
Fluoride	0.0853	J	0.20	0.082	mg/L			03/07/17 05:18	1
Sulfate	<0.70		1.0	0.70	mg/L			03/07/17 05:18	1

Lab Sample ID: LCS 400-344724/5
Matrix: Water
Analysis Batch: 344724

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 400-344724/6
Matrix: Water
Analysis Batch: 344724

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	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

Lab Sample ID: 400-134559-1 MS
Matrix: Water
Analysis Batch: 344724

Client Sample ID: GWA-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.7		10.0	15.3		mg/L		106	80 - 120
Fluoride	0.11	J B	10.0	10.7		mg/L		106	80 - 120
Sulfate	0.99	J	10.0	11.4		mg/L		104	80 - 120

Lab Sample ID: 400-134559-1 MSD
Matrix: Water
Analysis Batch: 344724

Client Sample ID: GWA-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	4.7		10.0	15.4		mg/L		106	80 - 120	0	20
Fluoride	0.11	J B	10.0	10.6		mg/L		105	80 - 120	0	20
Sulfate	0.99	J	10.0	11.4		mg/L		105	80 - 120	1	20

Lab Sample ID: MB 400-345054/4
Matrix: Water
Analysis Batch: 345054

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			03/08/17 00:32	1
Fluoride	0.0854	J	0.20	0.082	mg/L			03/08/17 00:32	1
Sulfate	<0.70		1.0	0.70	mg/L			03/08/17 00:32	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-345054/5
Matrix: Water
Analysis Batch: 345054

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	10.3		mg/L		103	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 400-345054/6
Matrix: Water
Analysis Batch: 345054

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	9.91		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	0	15

Lab Sample ID: 400-134525-H-1 MS
Matrix: Water
Analysis Batch: 345054

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	890		500	1460		mg/L		113	80 - 120
Fluoride	4.6	J B	500	535		mg/L		106	80 - 120
Sulfate	2600	E	500	3200	E 4	mg/L		115	80 - 120

Lab Sample ID: 400-134525-H-1 MSD
Matrix: Water
Analysis Batch: 345054

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	890		500	1460		mg/L		113	80 - 120	0	20
Fluoride	4.6	J B	500	535		mg/L		106	80 - 120	0	20
Sulfate	2600	E	500	3200	E 4	mg/L		115	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: 400-134559-1
SDG: Landfill 4

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: 400-134559-1
SDG: Landfill 4

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 Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
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

Lab Sample ID: MB 400-344598/1-A ^5

Matrix: Water

Analysis Batch: 344944

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 344598

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 10:03	03/07/17 18:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:03	03/07/17 18:42	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/06/17 10:03	03/07/17 18:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 18:42	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/07/17 18:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/07/17 18:42	5
Calcium	<0.13		0.25	0.13	mg/L		03/06/17 10:03	03/07/17 18:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:03	03/07/17 18:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:03	03/07/17 18:42	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/07/17 18:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:03	03/07/17 18:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:03	03/07/17 18:42	5
Thallium	<0.00085		0.00050	0.00085	mg/L		03/06/17 10:03	03/07/17 18:42	5

Lab Sample ID: LCS 400-344598/2-A

Matrix: Water

Analysis Batch: 344944

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 344598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0838	^ *	mg/L		168	80 - 120
Arsenic	0.0500	0.0478		mg/L		96	80 - 120
Barium	0.0500	0.0518		mg/L		104	80 - 120
Beryllium	0.0500	0.0550		mg/L		110	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Cadmium	0.0500	0.0497		mg/L		99	80 - 120
Calcium	5.00	4.99		mg/L		100	80 - 120
Chromium	0.0500	0.0559		mg/L		112	80 - 120
Cobalt	0.0500	0.0530		mg/L		106	80 - 120
Lead	0.0500	0.0564		mg/L		113	80 - 120
Lithium	0.0500	0.0530		mg/L		106	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-344598/2-A
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	0.0500	0.0487		mg/L		97	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

Lab Sample ID: LCS 400-344598/2-A
Matrix: Water
Analysis Batch: 345334

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0565		mg/L		113	80 - 120

Lab Sample ID: 400-134559-3 MS
Matrix: Water
Analysis Batch: 344944

Client Sample ID: GWA-4R
Prep Type: Total Recoverable
Prep Batch: 344598

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0027		0.0500	0.0537		mg/L		102	75 - 125
Barium	0.021		0.0500	0.0722		mg/L		103	75 - 125
Beryllium	<0.00034		0.0500	0.0538		mg/L		108	75 - 125
Boron	<0.021		0.100	0.125		mg/L		125	75 - 125
Cadmium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125
Calcium	1.1		5.00	6.23		mg/L		103	75 - 125
Cobalt	0.0010	J	0.0500	0.0601		mg/L		118	75 - 125
Lead	<0.00035		0.0500	0.0521		mg/L		104	75 - 125
Lithium	<0.0032		0.0500	0.0534		mg/L		107	75 - 125
Molybdenum	0.0059	J	0.100	0.115		mg/L		109	75 - 125
Selenium	0.0024		0.0500	0.0538		mg/L		103	75 - 125
Thallium	<0.000085		0.0100	0.0106		mg/L		106	75 - 125

Lab Sample ID: 400-134559-3 MSD
Matrix: Water
Analysis Batch: 344944

Client Sample ID: GWA-4R
Prep Type: Total Recoverable
Prep Batch: 344598

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0027		0.0500	0.0534		mg/L		101	75 - 125	1	20
Barium	0.021		0.0500	0.0738		mg/L		107	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0553		mg/L		111	75 - 125	3	20
Boron	<0.021		0.100	0.119		mg/L		119	75 - 125	4	20
Cadmium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125	1	20
Calcium	1.1		5.00	6.28		mg/L		104	75 - 125	1	20
Cobalt	0.0010	J	0.0500	0.0576		mg/L		113	75 - 125	4	20
Lead	<0.00035		0.0500	0.0520		mg/L		104	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0537		mg/L		107	75 - 125	1	20
Molybdenum	0.0059	J	0.100	0.101		mg/L		95	75 - 125	13	20
Selenium	0.0024		0.0500	0.0499		mg/L		95	75 - 125	8	20
Thallium	<0.000085		0.0100	0.0106		mg/L		106	75 - 125	0	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-344652/1-A ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^	0.0025	0.0010	mg/L		03/08/17 09:20	03/08/17 16:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/08/17 09:20	03/08/17 16:59	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/08/17 09:20	03/08/17 16:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 16:59	5
Boron	<0.021		0.050	0.021	mg/L		03/08/17 09:20	03/08/17 16:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/08/17 09:20	03/08/17 16:59	5
Calcium	<0.13		0.25	0.13	mg/L		03/08/17 09:20	03/08/17 16:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/08/17 09:20	03/08/17 16:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/08/17 09:20	03/08/17 16:59	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/08/17 09:20	03/08/17 16:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/08/17 09:20	03/08/17 16:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/08/17 09:20	03/08/17 16:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/08/17 09:20	03/08/17 16:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/08/17 09:20	03/08/17 16:59	5

Lab Sample ID: LCS 400-344652/2-A
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.107	^ *	mg/L		215	80 - 120
Arsenic	0.0500	0.0517		mg/L		103	80 - 120
Barium	0.0500	0.0511		mg/L		102	80 - 120
Beryllium	0.0500	0.0498		mg/L		100	80 - 120
Boron	0.100	0.0950		mg/L		95	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Calcium	5.00	5.03		mg/L		101	80 - 120
Chromium	0.0500	0.0478		mg/L		96	80 - 120
Cobalt	0.0500	0.0548		mg/L		110	80 - 120
Lead	0.0500	0.0590	^	mg/L		118	80 - 120
Lithium	0.0500	0.0520		mg/L		104	80 - 120
Molybdenum	0.100	0.105		mg/L		105	80 - 120
Selenium	0.0500	0.0502		mg/L		100	80 - 120
Thallium	0.0100	0.0106		mg/L		106	80 - 120

Lab Sample ID: 400-134749-H-2-B MS ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	<0.00046		0.0500	0.0547		mg/L		109	75 - 125
Barium	0.025		0.0500	0.0756		mg/L		100	75 - 125
Beryllium	<0.00034		0.0500	0.0518		mg/L		104	75 - 125
Boron	0.11		0.100	0.223		mg/L		109	75 - 125
Cadmium	<0.00034		0.0500	0.0541		mg/L		108	75 - 125
Calcium	16		5.00	21.5		mg/L		102	75 - 125
Chromium	0.0028		0.0500	0.0545		mg/L		103	75 - 125
Cobalt	<0.00040		0.0500	0.0597		mg/L		119	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-134749-H-2-B MS ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lithium	<0.0032		0.0500	0.0542		mg/L		108	75 - 125
Molybdenum	<0.00085		0.100	0.118		mg/L		118	75 - 125
Selenium	0.00028	J	0.0500	0.0580		mg/L		115	75 - 125
Thallium	<0.00085		0.0100	0.0109		mg/L		109	75 - 125

Lab Sample ID: 400-134749-H-2-C MSD ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	<0.00046		0.0500	0.0531		mg/L		106	75 - 125	3	20
Barium	0.025		0.0500	0.0775		mg/L		104	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0508		mg/L		102	75 - 125	2	20
Boron	0.11		0.100	0.219		mg/L		104	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0523		mg/L		105	75 - 125	3	20
Calcium	16		5.00	21.3		mg/L		98	75 - 125	1	20
Chromium	0.0028		0.0500	0.0538		mg/L		102	75 - 125	1	20
Cobalt	<0.00040		0.0500	0.0596		mg/L		119	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0529		mg/L		106	75 - 125	2	20
Molybdenum	<0.00085		0.100	0.110		mg/L		110	75 - 125	7	20
Selenium	0.00028	J	0.0500	0.0532		mg/L		106	75 - 125	9	20
Thallium	<0.00085		0.0100	0.0107		mg/L		107	75 - 125	2	20

Method: 6020 - Metals (ICP/MS) - RA

Lab Sample ID: MB 400-344598/1-A ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344598

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium - RA	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:03	03/08/17 11:52	5
Boron - RA	<0.021		0.050	0.021	mg/L		03/06/17 10:03	03/08/17 11:52	5
Chromium - RA	<0.0011		0.0025	0.0011	mg/L		03/06/17 10:03	03/08/17 11:52	5
Lithium - RA	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:03	03/08/17 11:52	5

Lab Sample ID: LCS 400-344598/2-A
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Beryllium - RA	0.0500	0.0507		mg/L		101	80 - 120
Boron - RA	0.100	0.0990		mg/L		99	80 - 120
Chromium - RA	0.0500	0.0468		mg/L		94	80 - 120
Lithium - RA	0.0500	0.0513		mg/L		103	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-344229/14-A
Matrix: Water
Analysis Batch: 344641

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000140	J	0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:27	1

Lab Sample ID: LCS 400-344229/15-A
Matrix: Water
Analysis Batch: 344641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00101		mg/L		101	80 - 120

Lab Sample ID: 400-134517-D-4-B MS
Matrix: Water
Analysis Batch: 344641

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 344229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00203		mg/L		101	80 - 120

Lab Sample ID: 400-134517-D-4-C MSD
Matrix: Water
Analysis Batch: 344641

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 344229

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00206		mg/L		102	80 - 120	2	20

Lab Sample ID: MB 400-344588/14-A
Matrix: Water
Analysis Batch: 345180

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344588

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 09:18	03/09/17 13:45	1

Lab Sample ID: LCS 400-344588/15-A
Matrix: Water
Analysis Batch: 345180

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344588

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000883		mg/L		88	80 - 120

Lab Sample ID: 400-134559-9 MS
Matrix: Water
Analysis Batch: 345180

Client Sample ID: GWA-16
Prep Type: Total/NA
Prep Batch: 344588

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00194		mg/L		96	80 - 120

Lab Sample ID: 400-134559-9 MSD
Matrix: Water
Analysis Batch: 345180

Client Sample ID: GWA-16
Prep Type: Total/NA
Prep Batch: 344588

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00195		mg/L		97	80 - 120	1	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-344530/1
Matrix: Water
Analysis Batch: 344530

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			03/04/17 15:03	1

Lab Sample ID: LCS 400-344530/2
Matrix: Water
Analysis Batch: 344530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	246		mg/L		84	78 - 122

Lab Sample ID: 400-134525-G-4 DU
Matrix: Water
Analysis Batch: 344530

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	860		864		mg/L		0	5

Lab Sample ID: MB 400-344546/1
Matrix: Water
Analysis Batch: 344546

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			03/05/17 12:58	1

Lab Sample ID: LCS 400-344546/2
Matrix: Water
Analysis Batch: 344546

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	276		mg/L		94	78 - 122

Lab Sample ID: 400-134634-A-1 DU
Matrix: Water
Analysis Batch: 344546

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	330		328		mg/L		0.6	5

Lab Sample ID: MB 400-344550/1
Matrix: Water
Analysis Batch: 344550

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			03/05/17 13:51	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
SDG: Landfill 4

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 400-344550/2
Matrix: Water
Analysis Batch: 344550

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	294		mg/L		100	78 - 122

Lab Sample ID: 400-134559-9 DU
Matrix: Water
Analysis Batch: 344550

Client Sample ID: GWA-16
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	6.0		6.00		mg/L		0	5

Lab Sample ID: 400-134559-18 DU
Matrix: Water
Analysis Batch: 344550

Client Sample ID: GWC-20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	40		40.0		mg/L		0	5

Lab Sample ID: MB 400-344648/1
Matrix: Water
Analysis Batch: 344648

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			03/06/17 16:22	1

Lab Sample ID: LCS 400-344648/2
Matrix: Water
Analysis Batch: 344648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	286		mg/L		98	78 - 122

Lab Sample ID: 400-134559-25 DU
Matrix: Water
Analysis Batch: 344648

Client Sample ID: GWC-23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	38		38.0		mg/L		0	5

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 5355 McLemul...
 Pensacola, FL 32514
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Chain of Custody Record

Client Information
 Client Contact:
 Joji Abraham
 Southern Company
 241 Ralph McGill Blvd SE B10185
 Atlanta, GA, 30308
 Phone: 404-506-7239
 Email: JAbraham@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Sampler: *M. Burns*
 Lab Pilt: *M. Thomas*
 Phone: *T. 72-702*
 Lab Pilt: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com

Carrier Tracking No(s):
 Page: 1 of 1
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, O=Other)	Analysis Requested		Special Instructions/Notes
					TDS - SM 2540C: Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 8020 & EPA 7470	
GWA-2	2/28/17	1010	G	W			
GWA-3	2/28/17	1025	G	W			
GWA-4R	2/28/17	1220	G	W			
GWA-5	2/28/17	1210	G	W			
GWA-13	2/28/17	1350	G	W			
GWA-14	2/28/17	1355	G	W			
GWA-15	2/28/17	1405	G	W			
POP-1	2/28/17	—	G	W			

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: *Will King (EPA)* Date: 2/28/17 Company: _____
 Relinquished by: _____ Date: 2/28/17 Company: _____
 Relinquished by: _____ Date: _____ Company: _____

Custody Seal No. _____
 A Yes Δ No
 Custody Seals Intact
 Colder Temperature 2 and Other Remarks: *0.3/14/12.8 14°C 12.2*



Chain of Custody Record

Client Information
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-508-7239
 Email: LMPELLY@Southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Sampler: M. Burch III, B. M. Thomas III, T. Payne T.P.
Lab PM: Whitmore, Cheyenne R.
W. Virgo WFV
Phone: 878-486-2700
E-Mail: cheyenne.whitmore@testamericainc.com

Carrier Tracking No(s):
Job #: 1092
Page: 1 of 2
COC No:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Solid, Organic, Inorganic, Soil)	Preservation Code	Field Preserved Sample (Yes or No)	Perform Method (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Per 257 Appendix III & IV) EPA 8020 & EPA 7470	Radium 226 & 228 - SW-846 8315 & 9320	Total Number of Containers	Special Instructions/Note:
6WA-16	3/1/17	1106	G	W		X	X				3	
6WC-17	3/1/17	1235	G	W		X	X				3	
6WC-1	3/1/17	0915	G	W		X	X				3	
6WC-12	3/1/17	0950	G	W		X	X				3	
6WC-11	3/1/17	1125	G	W		X	X				4	200 ppm w/1 Collected for Lab QA/QC
6WC-10	3/1/17	1230	G	W		X	X				4	200 ppm w/1 Collected for Lab QA/QC
6WC-9	3/1/17	1500	G	W		X	X				3	
6WC-21	3/1/17	1415	G	W		X	X				3	
6WC-19	3/1/17	1405	G	W		X	X				3	
6WC-20	3/1/17	1545	G	W		X	X				3	
6WC-18	3/1/17	1610	G	W		X	X				3	

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal By Lab Archive For Months

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: Will Vingo (EPA) [Signature]
 Relinquished by: [Signature]
 Relinquished by: [Signature]
 Relinquished by: [Signature]

Method of Shipment:
 Date/Time: 3/1/17 1740
 Date/Time: 3/1/17 1740
 Date/Time: 3/1/17 9:06
 Date/Time: 3/1/17 9:06

Custody Seal No
 Δ Yes Δ No
 00°C 18-2



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 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

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: LMPELTY@Southernco.com Project Name: Plant McIntosh - Landfill #4 Site: CCR		Lab P/N: Whittire, Cheyenne R E-Mail: cheyenne.whittire@testamericainc.com		
Due Date Requested: TAT Requested (days): PO #: W/O #: Project #: SSO/W #:		Carrier Tracking No(s): Page: 2 of 2 Job #:		
Analysis Requested Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 TSS - SM 2540C ; Cl.F.804 - EPA 300		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 - As/NO2 P - Na2CO3 Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA Z - other (specify)		
Sample Identification Sample Date Sample Time Sample Type (C-comp, G-grab) Matrix (Water, Soil, Sewage, Sludge, Other)		Special Instructions/Note:		
DOP-2	3/1/17	6	W	
FB-1	3/1/17	1048	W	
FEB-1	3/1/17	1055	W	
FB-2	3/1/17	1455	W	
FEB-2	3/1/17	1500	W	
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		
Empty Kit Relinquished by: Relinquished by: Will Vingo (EOW) Relinquished by: [Signature] Relinquished by: [Signature]		Special Instructions/QC Requirements: Method of Shipment: Received by: [Signature] 3/1/17 1740 Received by: [Signature] 3/2/17 988 Received by: [Signature]		
Custody Seals Intact: Δ Yes Δ No Custody Seal No.:		Cooler Temperature(s) / Grand Entry Remarks:		



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 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record



Client Information Client Contact: Jofu Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State: GA, Zip: 30308 Phone: 404-506-7239 Email: LMPEIT@Southern.com Project Name: Plant McIntosh - Landfill #4 Site: CCR		Lab P/N: Whitnirre, Cheyenne R Lab P/N: Whitnirre, Cheyenne R Email: cheyenne.whitnirre@testamericainc.com Phone: 678-486-2700		Carrier Tracking No(s): Job #: 1091		COC No:	
Analysis Requested Due Date Requested: TAT Requested (days): PO #: W/O #: Project #: SSOW#:		TDS - SM 2540C: Cl, F, SO4 - EPA 300 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - GW-018 0315 & 0320		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCA W - pH 4-5 Z - other (specify)		Special Instructions/Note: Total number of samples: 6 Matrix: W	
Sample Identification Sample Date: 3/2/17 0925 Sample Time: 6 Sample Type (C=comp, G=grab): G Matrix (W=water, S=solid, O=other): W		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:	
Relinquished by: Will Vise (EPM) Relinquished by: [Signature] Relinquished by: [Signature]		Date/Time: 3/3/17 1200 Date/Time: 3-3-17 1201 Date/Time:		Date/Time: 3-3-17 1200 Date/Time: 3/4/17 0836 Date/Time:		Company: [Blank] Company: TPA Company: [Blank]	
Empty Kit Relinquished by: [Signature] Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 2.0°C RR 2		Method of Shipment:		Company:	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134559-1

SDG Number: Landfill 4

Login Number: 134559

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	2.4°C, 1.1°C, 0.0°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-1
 SDG: Landfill 4

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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



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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-134559-2

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

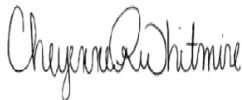
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/31/2017 5:02:56 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: 400-134559-2
SDG: Landfill 4

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134559-1	GWA-2	Water	02/28/17 10:10	03/02/17 09:06
400-134559-2	GWA-3	Water	02/28/17 10:25	03/02/17 09:06
400-134559-3	GWA-4R	Water	02/28/17 12:20	03/02/17 09:06
400-134559-4	GWA-5	Water	02/28/17 12:10	03/02/17 09:06
400-134559-5	GWA-13	Water	02/28/17 13:50	03/02/17 09:06
400-134559-6	GWA-14	Water	02/28/17 13:55	03/02/17 09:06
400-134559-7	GWA-15	Water	02/28/17 14:05	03/02/17 09:06
400-134559-8	DUP-1	Water	02/28/17 00:00	03/02/17 09:06
400-134559-9	GWA-16	Water	03/01/17 11:06	03/03/17 09:06
400-134559-10	GWC-17	Water	03/01/17 12:35	03/03/17 09:06
400-134559-11	GWC-1	Water	03/01/17 09:15	03/03/17 09:06
400-134559-12	GWC-12	Water	03/01/17 09:50	03/03/17 09:06
400-134559-13	GWC-11	Water	03/01/17 11:25	03/03/17 09:06
400-134559-14	GWC-10	Water	03/01/17 12:30	03/03/17 09:06
400-134559-15	GWC-9	Water	03/01/17 15:00	03/03/17 09:06
400-134559-16	GWC-21	Water	03/01/17 14:15	03/03/17 09:06
400-134559-17	GWC-19	Water	03/01/17 14:05	03/03/17 09:06
400-134559-18	GWC-20	Water	03/01/17 15:45	03/03/17 09:06
400-134559-19	GWC-18	Water	03/01/17 16:10	03/03/17 09:06
400-134559-20	DUP-2	Water	03/01/17 00:00	03/03/17 09:06
400-134559-21	FB-1	Water	03/01/17 10:48	03/03/17 09:06
400-134559-22	FERB-1	Water	03/01/17 10:55	03/03/17 09:06
400-134559-23	FB-2	Water	03/01/17 14:55	03/03/17 09:06
400-134559-24	FERB-2	Water	03/01/17 15:00	03/03/17 09:06
400-134559-25	GWC-23	Water	03/02/17 09:25	03/04/17 08:36

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWA-2
Date Collected: 02/28/17 10:10
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-1
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	0.378		0.136	0.140	1.00	0.146	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00900	U	0.212	0.212	1.00	0.385	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	86.4		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.369	U	0.252	0.254	5.00	0.385	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWA-3
Date Collected: 02/28/17 10:25
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-2
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	0.390		0.146	0.151	1.00	0.162	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.3		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.228	U	0.253	0.254	1.00	0.416	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.3		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	89.3		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.619		0.293	0.296	5.00	0.416	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWA-4R

Lab Sample ID: 400-134559-3

Date Collected: 02/28/17 12:20

Matrix: Water

Date Received: 03/02/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0831	U	0.0900	0.0903	1.00	0.144	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.449		0.278	0.281	1.00	0.423	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	83.4		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.532		0.292	0.295	5.00	0.423	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWA-5
Date Collected: 02/28/17 12:10
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-4
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	0.327		0.127	0.130	1.00	0.141	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.152	U	0.237	0.238	1.00	0.400	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	84.9		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.479		0.269	0.271	5.00	0.400	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWA-13

Lab Sample ID: 400-134559-5

Date Collected: 02/28/17 13:50

Matrix: Water

Date Received: 03/02/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.392		0.137	0.142	1.00	0.141	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.180	U	0.213	0.214	1.00	0.352	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	85.2		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.572		0.254	0.257	5.00	0.352	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWA-14

Lab Sample ID: 400-134559-6

Date Collected: 02/28/17 13:55

Matrix: Water

Date Received: 03/02/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.234		0.107	0.110	1.00	0.124	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.265	U	0.232	0.233	1.00	0.370	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	82.2		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.499		0.256	0.258	5.00	0.370	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWA-15

Lab Sample ID: 400-134559-7

Date Collected: 02/28/17 14:05

Matrix: Water

Date Received: 03/02/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.225		0.110	0.111	1.00	0.134	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.223	U	0.230	0.231	1.00	0.375	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	86.4		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.448		0.255	0.256	5.00	0.375	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: DUP-1

Lab Sample ID: 400-134559-8

Date Collected: 02/28/17 00:00

Matrix: Water

Date Received: 03/02/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.136		0.0935	0.0943	1.00	0.131	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/07/17 10:37	03/29/17 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.149	U	0.228	0.228	1.00	0.431	pCi/L	03/07/17 11:11	03/23/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/07/17 11:11	03/23/17 10:41	1
Y Carrier	84.9		40 - 110					03/07/17 11:11	03/23/17 10:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0132	U	0.246	0.247	5.00	0.431	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWA-16

Lab Sample ID: 400-134559-9

Date Collected: 03/01/17 11:06

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.369		0.120	0.124	1.00	0.101	pCi/L	03/07/17 10:37	03/29/17 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					03/07/17 10:37	03/29/17 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.135	U	0.178	0.178	1.00	0.353	pCi/L	03/07/17 11:11	03/23/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					03/07/17 11:11	03/23/17 10:41	1
Y Carrier	84.1		40 - 110					03/07/17 11:11	03/23/17 10:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.234	U	0.214	0.217	5.00	0.353	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-17

Lab Sample ID: 400-134559-10

Date Collected: 03/01/17 12:35

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.233		0.0992	0.101	1.00	0.106	pCi/L	03/07/17 10:37	03/29/17 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					03/07/17 10:37	03/29/17 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0494	U	0.195	0.195	1.00	0.360	pCi/L	03/07/17 11:11	03/23/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					03/07/17 11:11	03/23/17 10:41	1
Y Carrier	85.2		40 - 110					03/07/17 11:11	03/23/17 10:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.184	U	0.219	0.220	5.00	0.360	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWC-1
Date Collected: 03/01/17 09:15
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-11
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	0.453		0.137	0.143	1.00	0.122	pCi/L	03/07/17 10:37	03/29/17 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					03/07/17 10:37	03/29/17 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0693	U	0.281	0.281	1.00	0.488	pCi/L	03/07/17 11:11	03/23/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					03/07/17 11:11	03/23/17 10:41	1
Y Carrier	77.4		40 - 110					03/07/17 11:11	03/23/17 10:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.522		0.312	0.315	5.00	0.488	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWC-12

Lab Sample ID: 400-134559-12

Date Collected: 03/01/17 09:50

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.129		0.0850	0.0858	1.00	0.115	pCi/L	03/07/17 10:37	03/29/17 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					03/07/17 10:37	03/29/17 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0563	U	0.197	0.197	1.00	0.345	pCi/L	03/07/17 11:11	03/23/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					03/07/17 11:11	03/23/17 10:41	1
Y Carrier	83.0		40 - 110					03/07/17 11:11	03/23/17 10:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.185	U	0.214	0.215	5.00	0.345	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-11

Lab Sample ID: 400-134559-13

Date Collected: 03/01/17 11:25

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0726	U	0.0721	0.0724	1.00	0.112	pCi/L	03/07/17 10:37	03/29/17 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					03/07/17 10:37	03/29/17 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.124	U	0.273	0.274	1.00	0.466	pCi/L	03/07/17 11:11	03/23/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					03/07/17 11:11	03/23/17 10:41	1
Y Carrier	83.7		40 - 110					03/07/17 11:11	03/23/17 10:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.197	U	0.283	0.283	5.00	0.466	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-10

Lab Sample ID: 400-134559-14

Date Collected: 03/01/17 12:30

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.118		0.0836	0.0843	1.00	0.118	pCi/L	03/07/17 12:46	03/29/17 08:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					03/07/17 12:46	03/29/17 08:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.209	0.211	1.00	0.321	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	84.9		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.425		0.226	0.228	5.00	0.321	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWC-9
Date Collected: 03/01/17 15:00
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-15
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.492		0.133	0.140	1.00	0.104	pCi/L	03/07/17 12:46	03/29/17 08:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					03/07/17 12:46	03/29/17 08:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.729		0.255	0.263	1.00	0.342	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	87.1		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.22		0.287	0.298	5.00	0.342	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWC-21

Lab Sample ID: 400-134559-16

Date Collected: 03/01/17 14:15

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.240		0.108	0.110	1.00	0.121	pCi/L	03/07/17 12:46	03/29/17 08:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					03/07/17 12:46	03/29/17 08:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.881		0.279	0.290	1.00	0.351	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	87.9		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.299	0.310	5.00	0.351	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWC-19

Lab Sample ID: 400-134559-17

Date Collected: 03/01/17 14:05

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.115	U	0.0905	0.0911	1.00	0.134	pCi/L	03/07/17 12:46	03/29/17 08:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/07/17 12:46	03/29/17 08:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.241	U	0.237	0.238	1.00	0.385	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	84.9		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.356	U	0.254	0.255	5.00	0.385	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-20

Lab Sample ID: 400-134559-18

Date Collected: 03/01/17 15:45

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.132		0.0853	0.0861	1.00	0.113	pCi/L	03/07/17 12:46	03/29/17 08:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					03/07/17 12:46	03/29/17 08:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.571		0.247	0.252	1.00	0.350	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	88.6		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.704		0.261	0.267	5.00	0.350	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-18

Lab Sample ID: 400-134559-19

Date Collected: 03/01/17 16:10

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0333	U	0.0753	0.0753	1.00	0.136	pCi/L	03/07/17 12:46	03/29/17 08:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/07/17 12:46	03/29/17 08:24	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0975	U	0.216	0.216	1.00	0.371	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	87.9		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.131	U	0.229	0.229	5.00	0.371	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: DUP-2

Lab Sample ID: 400-134559-20

Date Collected: 03/01/17 00:00

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.606		0.153	0.163	1.00	0.113	pCi/L	03/07/17 12:46	03/29/17 10:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					03/07/17 12:46	03/29/17 10:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.220	0.222	1.00	0.342	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	92.0		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.929		0.269	0.276	5.00	0.342	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: FB-1
Date Collected: 03/01/17 10:48
Date Received: 03/03/17 09:06

Lab Sample ID: 400-134559-21
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	0.0851	U	0.0824	0.0827	1.00	0.129	pCi/L	03/07/17 12:46	03/29/17 10:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					03/07/17 12:46	03/29/17 10:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.485		0.262	0.265	1.00	0.394	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	89.7		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.570		0.274	0.278	5.00	0.394	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: FERB-1

Lab Sample ID: 400-134559-22

Date Collected: 03/01/17 10:55

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0642	U	0.0739	0.0741	1.00	0.120	pCi/L	03/07/17 12:46	03/29/17 10:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/07/17 12:46	03/29/17 10:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.463		0.247	0.251	1.00	0.370	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	92.7		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.528		0.258	0.261	5.00	0.370	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: FB-2

Lab Sample ID: 400-134559-23

Date Collected: 03/01/17 14:55

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0423	U	0.0615	0.0616	1.00	0.105	pCi/L	03/07/17 12:46	03/29/17 10:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					03/07/17 12:46	03/29/17 10:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.498		0.256	0.260	1.00	0.380	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	83.4		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.540		0.264	0.268	5.00	0.380	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: FERB-2

Lab Sample ID: 400-134559-24

Date Collected: 03/01/17 15:00

Matrix: Water

Date Received: 03/03/17 09:06

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0486	U	0.0645	0.0647	1.00	0.108	pCi/L	03/07/17 12:46	03/29/17 10:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/07/17 12:46	03/29/17 10:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.182	U	0.225	0.226	1.00	0.373	pCi/L	03/07/17 13:07	03/21/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/07/17 13:07	03/21/17 10:40	1
Y Carrier	84.9		40 - 110					03/07/17 13:07	03/21/17 10:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.230	U	0.234	0.235	5.00	0.373	pCi/L		03/31/17 09:06	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Client Sample ID: GWC-23

Lab Sample ID: 400-134559-25

Date Collected: 03/02/17 09:25

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	0.188		0.0908	0.0924	1.00	0.101	pCi/L	03/08/17 13:24	03/30/17 08:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/08/17 13:24	03/30/17 08:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.103	U	0.217	0.217	1.00	0.371	pCi/L	03/08/17 13:42	03/22/17 10:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/08/17 13:42	03/22/17 10:28	1
Y Carrier	81.5		40 - 110					03/08/17 13:42	03/22/17 10:28	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.291	U	0.235	0.236	5.00	0.371	pCi/L		03/31/17 09:06	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWA-2
Date Collected: 02/28/17 10:10
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWA-3
Date Collected: 02/28/17 10:25
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWA-4R
Date Collected: 02/28/17 12:20
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWA-5
Date Collected: 02/28/17 12:10
Date Received: 03/02/17 09:06

Lab Sample ID: 400-134559-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWA-13

Lab Sample ID: 400-134559-5

Date Collected: 02/28/17 13:50

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWA-14

Lab Sample ID: 400-134559-6

Date Collected: 02/28/17 13:55

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWA-15

Lab Sample ID: 400-134559-7

Date Collected: 02/28/17 14:05

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-134559-8

Date Collected: 02/28/17 00:00

Matrix: Water

Date Received: 03/02/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:15	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWA-16

Lab Sample ID: 400-134559-9

Date Collected: 03/01/17 11:06

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:16	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-17

Lab Sample ID: 400-134559-10

Date Collected: 03/01/17 12:35

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:16	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-134559-11

Date Collected: 03/01/17 09:15

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:16	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-12

Lab Sample ID: 400-134559-12

Date Collected: 03/01/17 09:50

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:16	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-11

Lab Sample ID: 400-134559-13

Date Collected: 03/01/17 11:25

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296371	03/07/17 10:37	BME	TAL SL
Total/NA	Analysis	9315		1	300479	03/29/17 08:16	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296377	03/07/17 11:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 10:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-10

Lab Sample ID: 400-134559-14

Date Collected: 03/01/17 12:30

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 08:23	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-9

Lab Sample ID: 400-134559-15

Date Collected: 03/01/17 15:00

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 08:24	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-21

Lab Sample ID: 400-134559-16

Date Collected: 03/01/17 14:15

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 08:24	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-19

Lab Sample ID: 400-134559-17

Date Collected: 03/01/17 14:05

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 08:24	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-20

Lab Sample ID: 400-134559-18

Date Collected: 03/01/17 15:45

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 08:24	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: GWC-18

Lab Sample ID: 400-134559-19

Date Collected: 03/01/17 16:10

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 08:24	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: DUP-2

Lab Sample ID: 400-134559-20

Date Collected: 03/01/17 00:00

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 10:48	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: FB-1

Lab Sample ID: 400-134559-21

Date Collected: 03/01/17 10:48

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 10:48	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-134559-22

Date Collected: 03/01/17 10:55

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 10:48	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: FB-2

Lab Sample ID: 400-134559-23

Date Collected: 03/01/17 14:55

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 10:48	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Client Sample ID: FERB-2

Lab Sample ID: 400-134559-24

Date Collected: 03/01/17 15:00

Matrix: Water

Date Received: 03/03/17 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296404	03/07/17 12:46	BME	TAL SL
Total/NA	Analysis	9315		1	300477	03/29/17 10:48	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296414	03/07/17 13:07	BME	TAL SL
Total/NA	Analysis	9320		1	298668	03/21/17 10:40	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Client Sample ID: GWC-23

Lab Sample ID: 400-134559-25

Date Collected: 03/02/17 09:25

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			296629	03/08/17 13:24	BME	TAL SL
Total/NA	Analysis	9315		1	300765	03/30/17 08:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			296630	03/08/17 13:42	BME	TAL SL
Total/NA	Analysis	9320		1	298902	03/22/17 10:28	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300936	03/31/17 09:06	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: 400-134559-2
SDG: Landfill 4

Rad

Prep Batch: 296371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total/NA	Water	PrecSep-21	
400-134559-2	GWA-3	Total/NA	Water	PrecSep-21	
400-134559-3	GWA-4R	Total/NA	Water	PrecSep-21	
400-134559-4	GWA-5	Total/NA	Water	PrecSep-21	
400-134559-5	GWA-13	Total/NA	Water	PrecSep-21	
400-134559-6	GWA-14	Total/NA	Water	PrecSep-21	
400-134559-7	GWA-15	Total/NA	Water	PrecSep-21	
400-134559-8	DUP-1	Total/NA	Water	PrecSep-21	
400-134559-9	GWA-16	Total/NA	Water	PrecSep-21	
400-134559-10	GWC-17	Total/NA	Water	PrecSep-21	
400-134559-11	GWC-1	Total/NA	Water	PrecSep-21	
400-134559-12	GWC-12	Total/NA	Water	PrecSep-21	
400-134559-13	GWC-11	Total/NA	Water	PrecSep-21	
MB 160-296371/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-296371/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
160-21295-A-1-B DU	Duplicate	Total/NA	Water	PrecSep-21	
400-134559-13 DU	GWC-11	Total/NA	Water	PrecSep-21	

Prep Batch: 296377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-1	GWA-2	Total/NA	Water	PrecSep_0	
400-134559-2	GWA-3	Total/NA	Water	PrecSep_0	
400-134559-3	GWA-4R	Total/NA	Water	PrecSep_0	
400-134559-4	GWA-5	Total/NA	Water	PrecSep_0	
400-134559-5	GWA-13	Total/NA	Water	PrecSep_0	
400-134559-6	GWA-14	Total/NA	Water	PrecSep_0	
400-134559-7	GWA-15	Total/NA	Water	PrecSep_0	
400-134559-8	DUP-1	Total/NA	Water	PrecSep_0	
400-134559-9	GWA-16	Total/NA	Water	PrecSep_0	
400-134559-10	GWC-17	Total/NA	Water	PrecSep_0	
400-134559-11	GWC-1	Total/NA	Water	PrecSep_0	
400-134559-12	GWC-12	Total/NA	Water	PrecSep_0	
400-134559-13	GWC-11	Total/NA	Water	PrecSep_0	
MB 160-296377/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-296377/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-134559-13 DU	GWC-11	Total/NA	Water	PrecSep_0	

Prep Batch: 296404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-14	GWC-10	Total/NA	Water	PrecSep-21	
400-134559-15	GWC-9	Total/NA	Water	PrecSep-21	
400-134559-16	GWC-21	Total/NA	Water	PrecSep-21	
400-134559-17	GWC-19	Total/NA	Water	PrecSep-21	
400-134559-18	GWC-20	Total/NA	Water	PrecSep-21	
400-134559-19	GWC-18	Total/NA	Water	PrecSep-21	
400-134559-20	DUP-2	Total/NA	Water	PrecSep-21	
400-134559-21	FB-1	Total/NA	Water	PrecSep-21	
400-134559-22	FERB-1	Total/NA	Water	PrecSep-21	
400-134559-23	FB-2	Total/NA	Water	PrecSep-21	
400-134559-24	FERB-2	Total/NA	Water	PrecSep-21	
MB 160-296404/1-A	Method Blank	Total/NA	Water	PrecSep-21	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Rad (Continued)

Prep Batch: 296404 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-296404/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-134559-14 DU	GWC-10	Total/NA	Water	PrecSep-21	

Prep Batch: 296414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-14	GWC-10	Total/NA	Water	PrecSep_0	
400-134559-15	GWC-9	Total/NA	Water	PrecSep_0	
400-134559-16	GWC-21	Total/NA	Water	PrecSep_0	
400-134559-17	GWC-19	Total/NA	Water	PrecSep_0	
400-134559-18	GWC-20	Total/NA	Water	PrecSep_0	
400-134559-19	GWC-18	Total/NA	Water	PrecSep_0	
400-134559-20	DUP-2	Total/NA	Water	PrecSep_0	
400-134559-21	FB-1	Total/NA	Water	PrecSep_0	
400-134559-22	FERB-1	Total/NA	Water	PrecSep_0	
400-134559-23	FB-2	Total/NA	Water	PrecSep_0	
400-134559-24	FERB-2	Total/NA	Water	PrecSep_0	
MB 160-296414/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-296414/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-134559-14 DU	GWC-10	Total/NA	Water	PrecSep_0	

Prep Batch: 296629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-25	GWC-23	Total/NA	Water	PrecSep-21	
MB 160-296629/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-296629/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-63992-D-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 296630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134559-25	GWC-23	Total/NA	Water	PrecSep_0	
MB 160-296630/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-296630/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-63992-D-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-296371/1-A
Matrix: Water
Analysis Batch: 300479

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296371

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04542	U	0.0887	0.0888	1.00	0.157	pCi/L	03/07/17 10:37	03/29/17 08:15	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
Ba Carrier	79.6				03/07/17 10:37	03/29/17 08:15	1			

Lab Sample ID: LCS 160-296371/2-A
Matrix: Water
Analysis Batch: 300479

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296371

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	10.61		1.13	1.00	0.127	pCi/L	93	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	40 - 110						
Ba Carrier	81.7				03/07/17 10:37	03/29/17 08:15	1		

Lab Sample ID: 160-21295-A-1-B DU
Matrix: Water
Analysis Batch: 300477

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296371

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.951		0.7378		0.200	1.00	0.151	pCi/L	0.50	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
Ba Carrier	80.5				03/07/17 10:37	03/29/17 08:15	1			

Lab Sample ID: 400-134559-13 DU
Matrix: Water
Analysis Batch: 300479

Client Sample ID: GWC-11
Prep Type: Total/NA
Prep Batch: 296371

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0726	U	0.06360	U	0.0734	1.00	0.119	pCi/L	0.06	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
Ba Carrier	88.8				03/07/17 10:37	03/29/17 08:15	1			

Lab Sample ID: MB 160-296404/1-A
Matrix: Water
Analysis Batch: 300477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296404

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.009446	U	0.0537	0.0537	1.00	0.109	pCi/L	03/07/17 12:46	03/29/17 08:23	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-296404/1-A
Matrix: Water
Analysis Batch: 300477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296404

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	92.3		40 - 110

Prepared	Analyzed	Dil Fac
03/07/17 12:46	03/29/17 08:23	1

Lab Sample ID: LCS 160-296404/2-A
Matrix: Water
Analysis Batch: 300477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296404

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.68		1.14	1.00	0.137	pCi/L	94	68 - 137

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.0		40 - 110

Lab Sample ID: 400-134559-14 DU
Matrix: Water
Analysis Batch: 300477

Client Sample ID: GWC-10
Prep Type: Total/NA
Prep Batch: 296404

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.118		0.01071	U	0.0543	1.00	0.109	pCi/L	0.77	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	90.9		40 - 110

Lab Sample ID: MB 160-296629/1-A
Matrix: Water
Analysis Batch: 300765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296629

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03260	U	0.0506	0.0507	1.00	0.0878	pCi/L	03/08/17 13:24	03/30/17 08:11	1

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	97.3		40 - 110

Prepared	Analyzed	Dil Fac
03/08/17 13:24	03/30/17 08:11	1

Lab Sample ID: LCS 160-296629/2-A
Matrix: Water
Analysis Batch: 300765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296629

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.17		1.08	1.00	0.116	pCi/L	89	68 - 137

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.2		40 - 110

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 180-63992-D-1-A DU
Matrix: Water
Analysis Batch: 300765

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296629

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0233	U	0.1377		0.0884	1.00	0.119	pCi/L	0.74	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	89.7		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-296377/1-A
Matrix: Water
Analysis Batch: 299257

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296377

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.007167	U	0.274	0.274	1.00	0.486	pCi/L	03/07/17 11:11	03/23/17 10:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.6		40 - 110					03/07/17 11:11	03/23/17 10:40	1
Y Carrier	85.6		40 - 110					03/07/17 11:11	03/23/17 10:40	1

Lab Sample ID: LCS 160-296377/2-A
Matrix: Water
Analysis Batch: 299257

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296377

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	13.7	15.96		1.72	1.00	0.418	pCi/L	117	56 - 140
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	81.7		40 - 110						
Y Carrier	87.5		40 - 110						

Lab Sample ID: 400-134559-13 DU
Matrix: Water
Analysis Batch: 299256

Client Sample ID: GWC-11
Prep Type: Total/NA
Prep Batch: 296377

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	0.124	U	0.3339	U	0.312	1.00	0.502	pCi/L	0.36	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	88.8		40 - 110							
Y Carrier	81.5		40 - 110							

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
SDG: Landfill 4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-296414/1-A
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296414

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.6748		0.255	0.263	1.00	0.348	pCi/L	03/07/17 13:07	03/21/17 10:39	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	92.3		40 - 110		03/07/17 13:07	03/21/17 10:39	1			
Y Carrier	85.2		40 - 110		03/07/17 13:07	03/21/17 10:39	1			

Lab Sample ID: LCS 160-296414/2-A
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296414

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-228	13.7	15.41		1.66	1.00	0.398	pCi/L	113	56 - 140
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier							
Ba Carrier	87.0		40 - 110						
Y Carrier	83.7		40 - 110						

Lab Sample ID: 400-134559-14 DU
Matrix: Water
Analysis Batch: 298668

Client Sample ID: GWC-10
Prep Type: Total/NA
Prep Batch: 296414

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	0.307	U	0.3176	U	0.272	1.00	0.433	pCi/L	0.02	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	90.9		40 - 110							
Y Carrier	89.7		40 - 110							

Lab Sample ID: MB 160-296630/1-A
Matrix: Water
Analysis Batch: 298902

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296630

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.5409		0.234	0.239	1.00	0.330	pCi/L	03/08/17 13:42	03/22/17 10:27	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	97.3		40 - 110		03/08/17 13:42	03/22/17 10:27	1			
Y Carrier	82.6		40 - 110		03/08/17 13:42	03/22/17 10:27	1			

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-134559-2
 SDG: Landfill 4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-296630/2-A
Matrix: Water
Analysis Batch: 298902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296630

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.7	14.50		1.57	1.00	0.380	pCi/L	106	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.2		40 - 110
Y Carrier	81.1		40 - 110

Lab Sample ID: 180-63992-D-1-B DU
Matrix: Water
Analysis Batch: 298902

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296630

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0358	U	0.3016	U	0.247	1.00	0.389	pCi/L	0.57	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	89.7		40 - 110
Y Carrier	81.9		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-134559-13 DU
Matrix: Water
Analysis Batch: 300936

Client Sample ID: GWC-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.197	U	0.3975	U	0.320	5.00	0.502	pCi/L	0.33	

Lab Sample ID: 400-134559-14 DU
Matrix: Water
Analysis Batch: 300936

Client Sample ID: GWC-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	0.425		0.3283	U	0.277	5.00	0.433	pCi/L	0.19	

TestAm Pensacola
 5355 McLemul
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAm icd
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information
 Client Contact:
 Joji 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 - Landfill #4
 Site:
 CCR

Sampler:
 M. Buck M. Thomas
 T. R. T. V. Y.
 Lab Pilt:
 Whitmire, Cheyenne R
 E-Mail:
 cheyenne.whitmire@testamericainc.com

Carrier Tracking No(s):
 Page: 1 of 1
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, O=Other)	Analysis Requested		Special Instructions/Notes
					TDS - SM 2540C: Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 8020 & EPA 7470	
GWA-2	2/28/17	1010	G	W			
GWA-3	2/28/17	1025	G	W			
GWA-4R	2/28/17	1220	G	W			
GWA-5	2/28/17	1210	G	W			
GWA-13	2/28/17	1350	G	W			
GWA-14	2/28/17	1355	G	W			
GWA-15	2/28/17	1405	G	W			
POP-1	2/28/17		G	W			

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [Signature] Date: 2/28/17 Company: [Blank]
Relinquished by: Will King (EDM) Date: 2/28/17 Company: 605
Relinquished by: [Signature] Date: 3/2/17 Company: TARPEN
Relinquished by: [Signature] Date: 3/2/17 Company: TARPEN

Custody Seal Intact: A Yes Δ No
 Custody Seal No. 11°C 12-2



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
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-508-7239
 Email: LMPELLY@Southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Sampler: M. Burch III, B. M. Thomas III, T. Payne T.P.
Lab PM: Whitmore, Cheyenne R.
W. Virgo WFV
Phone: 878-486-2700
Email: cheyenne.whitmore@testamericainc.com

Carrier Tracking No(s):
Job #: 1092
Page: 1 of 2
COC No:

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #:
SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Solid, Organic, Inorganic, Gas)	Preservation Code	Field Preserved Sample (Yes or No)		Perform Method (Yes or No)		Metals - (Per 257 Appendix III & IV) EPA 8020 & EPA 7470		Metals - SW-846 8315 & 9320		Total Number of Containers	Special Instructions/Note
						Y	N	Y	N	Y	N	Y	N		
6WA-16	3/1/17	1106	G	W											
6WC-17	3/1/17	1235	G	W											
6WC-1	3/1/17	0915	G	W											
6WC-12	3/1/17	0950	G	W											
6WC-11	3/1/17	1125	G	W											
6WC-10	3/1/17	1230	G	W											
6WC-9	3/1/17	1500	G	W											
6WC-21	3/1/17	1415	G	W											
6WC-19	3/1/17	1405	G	W											
6WC-20	3/1/17	1545	G	W											
6WC-18	3/1/17	1610	G	W											

Special Instructions/Note:
 2000 ppm w/1 Collected for Lab QA/QC
 2000 ppm w/1 Collected for Lab QA/QC

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal By Lab Archive For Months

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:
 Relinquished by: *Will Vingo (EPA)*
 Relinquished by: *[Signature]*
 Relinquished by:

Method of Shipment:
 Date/Time: 3/1/17 1740
 Date/Time: 3/1/17 1740
 Date/Time: 3/1/17 9:06
 Company: TA PER
 Company: TA PER
 Company: TA PER

Custody Seal No
 Custody Seal No: 00°C 18-2



TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

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: LMPELTY@Southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Lab POC: Whittrire, Cheyenne R
 E-Mail: cheyenne.whittrire@testamericainc.com
 Phone: 678-486-2700

Due Date Requested:
 TAT Requested (days):
 PO #:
 WIO #:
 Project #:
 SSOI#:

Carrier Tracking No(s):
 Page: 2 of 2
 Job #:

Analysis Requested:
 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470
 Radium 226 & 228 - SW-846 9315 & 9320
 TSS - SM 2540C ; Cl.F.804 - EPA 300

Preservation Codes:
 A - HCl
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - H2SO4
 F - MeOH
 G - Ammonia
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:
 M - Hexane
 N - None
 O - AsMeO2
 P - Na2CO3
 Q - Na2SO3
 R - Na2SO4
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - ph 4-5
 X - EDTA
 Z - other (specify)

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (None, Swab, Grab, etc.)
DOP-2	3/1/17	1048	G	W
FB-1	3/1/17	1055	G	W
FERB-1	3/1/17	1455	G	W
FERB-2	3/1/17	1500	G	W

Possible Hazard Identification:
 Non-Hazard
 Flammable
 Skin Irritant
 Poison B
 Unknown
 Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: Will Vingo (EOW) Date: 3/1/17
Relinquished by: [Signature] Date: 3/1/17
Relinquished by: [Signature] Date: 3/1/17
Relinquished by: [Signature] Date: 3/1/17

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: [Signature] Date: 3/1/17
Received by: [Signature] Date: 3/1/17
Received by: [Signature] Date: 3/1/17

Custody Seal Intact: Yes No
 Custody Seal No.:



TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record



Sampler: M. Burch M. B. M. Thomas M. T. Payne LP. W. Virgo WFV Phone: 678-486-2700		Lab P/N: Whitnire, Cheyenne R Email: cheyenne.whitnire@testamericainc.com		Carrier Tracking No(s): 1091		COC No:	
Client Information Client Contact: Jofu Abraham Southern Company		Due Date Requested: TAT Requested (days): PO #: W/O #: Project #: SSOW#:		Analysis Requested TDS - SM 2540C: Cl, F, SO4 - EPA 300 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - GW-018 0315 & 0320		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCA W - pH 4-5 Z - other (specify)	
Company: Address: City: State: Zr: CA, 30508 Phone: 404-506-7239 Email: LMP@SOUTHERN.COM Project Name: Plant, McIntosh - Landfill #4 Site: CCR		Sample Date 3/2/17 0925		Sample Time 6 W		Matrix (Liquid, Solid, Other)	
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)		Special Instructions/OC Requirements: 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/Note: 6W-23	
Relinquished by: Will Virgo (EPM)		Date/Time: 3/3/17 1200		Date/Time: 3/3/17 1200		Company: Company:	
Relinquished by: [Signature]		Date/Time: 3-3-17 1201		Date/Time: 3/4/17 0836		Company: Company:	
Relinquished by: [Signature]		Date/Time: 3-3-17 1201		Date/Time: 3/4/17 0836		Company: Company:	
Custody Seal No.: Δ Yes Δ No		Custody Seal No.: 2, 2, 2, 2, 2		Cooler Temperature(s) °C and Other Remarks: 2, 2, 2, 2, 2		Cooler Temperature(s) °C and Other Remarks: 2, 2, 2, 2, 2	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134559-2

SDG Number: Landfill 4

Login Number: 134559

List Source: TestAmerica Pensacola

List Number: 1

Creator: Siddoway, Benjamin

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4°C, 1.1°C, 0.0°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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: 400-134559-2
SDG: Landfill 4

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-134559-2
SDG: Landfill 4

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-136790-1

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

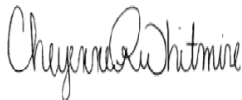
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/12/2017 5:14:39 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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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: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-2

Lab Sample ID: 400-136790-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.97	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.032		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.75		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00065	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3

Lab Sample ID: 400-136790-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0		1.0	0.89	mg/L	1		300.0	Total/NA
Arsenic	0.00069	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.69		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0036	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0020		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-136790-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.3		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00065	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00041	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	34		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4R

Lab Sample ID: 400-136790-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	5.9		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-4R (Continued)

Lab Sample ID: 400-136790-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.98		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00059	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-136790-5

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
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.27		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00050	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

Client Sample ID: GWA-14

Lab Sample ID: 400-136790-6

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
Sulfate	0.82	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.50		0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: GWA-15

Lab Sample ID: 400-136790-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.3		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.43		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00042	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-16

Lab Sample ID: 400-136790-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-16 (Continued)

Lab Sample ID: 400-136790-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.41		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00045	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

Client Sample ID: GWC-17

Lab Sample ID: 400-136790-9

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	0.12	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	0.77	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00055	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00055	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0024	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00053	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-136790-10

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	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0018	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-12

Lab Sample ID: 400-136790-11

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
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.65		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00056	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
 SDG: Landfill 4

Client Sample ID: FERB-2

Lab Sample ID: 400-136790-12

No Detections.

Client Sample ID: FB-2

Lab Sample ID: 400-136790-13

No Detections.

Client Sample ID: DUP-1

Lab Sample ID: 400-136790-14

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	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	0.74	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00061	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00058	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	3.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00061	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-136790-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.7		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	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0011	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0018	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

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: 400-136790-1
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136790-1	GWA-2	Water	04/19/17 15:10	04/25/17 08:47
400-136790-2	GWA-3	Water	04/19/17 15:30	04/25/17 08:47
400-136790-3	GWA-5	Water	04/20/17 10:10	04/25/17 08:47
400-136790-4	GWA-4R	Water	04/20/17 10:25	04/25/17 08:47
400-136790-5	GWA-13	Water	04/20/17 11:15	04/25/17 08:47
400-136790-6	GWA-14	Water	04/20/17 11:40	04/25/17 08:47
400-136790-7	GWA-15	Water	04/20/17 12:25	04/25/17 08:47
400-136790-8	GWA-16	Water	04/20/17 13:20	04/25/17 08:47
400-136790-9	GWC-17	Water	04/20/17 13:35	04/25/17 08:47
400-136790-10	GWC-1	Water	04/20/17 14:45	04/25/17 08:47
400-136790-11	GWC-12	Water	04/20/17 15:25	04/25/17 08:47
400-136790-12	FERB-2	Water	04/20/17 15:35	04/25/17 08:47
400-136790-13	FB-2	Water	04/20/17 12:40	04/25/17 08:47
400-136790-14	DUP-1	Water	04/20/17 00:00	04/25/17 08:47
400-136790-15	DUP-2	Water	04/20/17 00:00	04/25/17 08:47

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-2
Date Collected: 04/19/17 15:10
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			04/26/17 04:35	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 04:35	1
Sulfate	0.97	J	1.0	0.70	mg/L			04/26/17 04:35	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		05/04/17 18:27	05/08/17 15:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 15:21	5
Barium	0.032		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 15:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:21	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 15:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:21	5
Calcium	0.75		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 15:21	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 15:21	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 15:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 15:21	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 15:21	5
Molybdenum	0.0014	J	0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 15:21	5
Selenium	0.00065	J	0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 15:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 15:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:31	05/02/17 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			04/25/17 15:20	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
 SDG: Landfill 4

Client Sample ID: GWA-3
Date Collected: 04/19/17 15:30
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0		1.0	0.89	mg/L			04/26/17 05:43	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 05:43	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 05:43	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 14:58	5
Arsenic	0.00069	J	0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 14:58	5
Barium	0.013		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 14:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 14:58	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 14:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 14:58	5
Calcium	0.69		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 14:58	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 14:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 14:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 14:58	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 14:58	5
Molybdenum	0.0036	J	0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 14:58	5
Selenium	0.0020		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 14:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 14:58	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		04/27/17 09:31	05/02/17 10:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			04/25/17 15:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-5
Date Collected: 04/20/17 10:10
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.3		1.0	0.89	mg/L			04/26/17 06:06	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 06:06	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 06:06	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		05/04/17 18:27	05/08/17 15:25	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 15:25	5
Barium	0.040		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 15:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:25	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 15:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:25	5
Calcium	2.8		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 15:25	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 15:25	5
Cobalt	0.00065	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 15:25	5
Lead	0.00041	J	0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 15:25	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 15:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 15:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 15:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 15:25	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		04/27/17 09:31	05/02/17 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		5.0	3.4	mg/L			04/25/17 15:20	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
 SDG: Landfill 4

Client Sample ID: GWA-4R

Lab Sample ID: 400-136790-4

Date Collected: 04/20/17 10:25

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	3.5		1.0	0.89	mg/L			04/26/17 06:52	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 06:52	1
Sulfate	5.9		1.0	0.70	mg/L			04/26/17 06:52	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		05/04/17 18:27	05/08/17 15:30	5
Arsenic	0.0014		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 15:30	5
Barium	0.019		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 15:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:30	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 15:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:30	5
Calcium	0.98		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 15:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 15:30	5
Cobalt	0.00059 J		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 15:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 15:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 15:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 15:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 15:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 15:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:31	05/02/17 10:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			04/25/17 15:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-13
Date Collected: 04/20/17 11:15
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-5
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			04/26/17 07:15	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 07:15	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 07:15	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		05/04/17 18:27	05/08/17 15:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 15:34	5
Barium	0.015		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 15:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:34	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 15:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:34	5
Calcium	0.27		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 15:34	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 15:34	5
Cobalt	0.00050	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 15:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 15:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 15:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 15:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 15:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 15:34	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		04/27/17 09:31	05/02/17 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/25/17 15:20	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
 SDG: Landfill 4

Client Sample ID: GWA-14

Date Collected: 04/20/17 11:40

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-6

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			04/26/17 07:38	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 07:38	1
Sulfate	0.82	J	1.0	0.70	mg/L			04/26/17 07:38	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 15:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 15:52	5
Barium	0.011		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 15:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:52	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 15:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:52	5
Calcium	0.50		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 15:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 15:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 15:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 15:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 15:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 15:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 15:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 15:52	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		04/27/17 09:31	05/02/17 10:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/25/17 15:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-15

Date Collected: 04/20/17 12:25

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-7

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.3		1.0	0.89	mg/L			04/26/17 08:00	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 08:00	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 08:00	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 15:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 15:57	5
Barium	0.024		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 15:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:57	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 15:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 15:57	5
Calcium	0.43		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 15:57	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 15:57	5
Cobalt	0.00042	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 15:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 15:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 15:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 15:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 15:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 15:57	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:31	05/02/17 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-16

Date Collected: 04/20/17 13:20

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			04/26/17 08:23	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 08:23	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 08:23	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		05/04/17 18:27	05/08/17 16:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:01	5
Barium	0.022		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:01	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:01	5
Calcium	0.41		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:01	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:01	5
Cobalt	0.00045	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:01	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		04/27/17 09:31	05/02/17 10:30	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			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWC-17

Date Collected: 04/20/17 13:35

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-9

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			04/26/17 08:46	1
Fluoride	0.12	J	0.20	0.082	mg/L			04/26/17 08:46	1
Sulfate	0.77	J	1.0	0.70	mg/L			04/26/17 08:46	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		05/04/17 18:27	05/08/17 16:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:06	5
Barium	0.016		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:06	5
Beryllium	0.00055	J	0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:06	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:06	5
Cadmium	0.00055	J	0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:06	5
Calcium	2.0		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:06	5
Chromium	0.0024	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:06	5
Cobalt	0.00053	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:06	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:31	05/02/17 10:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6.0		5.0	3.4	mg/L			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWC-1
Date Collected: 04/20/17 14:45
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-10
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			04/26/17 09:09	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 09:09	1
Sulfate	1.3		1.0	0.70	mg/L			04/26/17 09:09	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 16:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:10	5
Barium	0.046		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:10	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:10	5
Calcium	2.6		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:10	5
Cobalt	0.0018	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:10	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		04/27/17 09:31	05/02/17 10:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWC-12

Date Collected: 04/20/17 15:25

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-11

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			04/26/17 21:50	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 21:50	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 21:50	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 16:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:15	5
Barium	0.010		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:15	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:15	5
Calcium	0.65		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:15	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:15	5
Cobalt	0.00056	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:15	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		04/27/17 09:31	05/02/17 10:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: FERB-2

Date Collected: 04/20/17 15:35

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-12

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			04/26/17 22:12	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 22:12	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 22:12	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		05/04/17 18:27	05/08/17 16:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:19	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:19	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:19	5
Calcium	<0.13		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:31	05/02/17 10:37	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			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: FB-2
Date Collected: 04/20/17 12:40
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-13
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			04/26/17 23:21	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 23:21	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 23:21	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 16:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:24	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:24	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:24	5
Calcium	<0.13		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:24	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:24	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		04/27/17 09:31	05/02/17 10:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: DUP-1

Date Collected: 04/20/17 00:00

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-14

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			04/27/17 00:29	1
Fluoride	0.13	J	0.20	0.082	mg/L			04/27/17 00:29	1
Sulfate	0.74	J	1.0	0.70	mg/L			04/27/17 00:29	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		05/04/17 18:27	05/08/17 16:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:28	5
Barium	0.017		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:28	5
Beryllium	0.00061	J	0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:28	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:28	5
Cadmium	0.00058	J	0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:28	5
Calcium	3.4		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:28	5
Chromium	0.0033		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:28	5
Cobalt	0.00061	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:31	05/02/17 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			04/26/17 16:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: DUP-2

Date Collected: 04/20/17 00:00

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-15

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.7		1.0	0.89	mg/L			04/27/17 00:52	1
Fluoride	<0.082		0.20	0.082	mg/L			04/27/17 00:52	1
Sulfate	1.3		1.0	0.70	mg/L			04/27/17 00:52	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		05/04/17 18:27	05/08/17 16:33	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:33	5
Barium	0.046		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:33	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:33	5
Calcium	2.7		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:33	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:33	5
Cobalt	0.0018	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:33	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:33	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:33	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		04/27/17 09:31	05/02/17 10:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			04/26/17 16:26	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

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.

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: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-2

Date Collected: 04/19/17 15:10

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351340	04/26/17 04:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 15:21	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351256	04/25/17 15:20	TET	TAL PEN

Client Sample ID: GWA-3

Date Collected: 04/19/17 15:30

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351340	04/26/17 05:43	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 14:58	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351256	04/25/17 15:20	TET	TAL PEN

Client Sample ID: GWA-5

Date Collected: 04/20/17 10:10

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351340	04/26/17 06:06	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 15:25	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351256	04/25/17 15:20	TET	TAL PEN

Client Sample ID: GWA-4R

Date Collected: 04/20/17 10:25

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351340	04/26/17 06:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 15:30	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351256	04/25/17 15:20	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWA-13

Lab Sample ID: 400-136790-5

Date Collected: 04/20/17 11:15

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	351340	04/26/17 07:15	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 15:34	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351256	04/25/17 15:20	TET	TAL PEN

Client Sample ID: GWA-14

Lab Sample ID: 400-136790-6

Date Collected: 04/20/17 11:40

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	351340	04/26/17 07:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 15:52	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351256	04/25/17 15:20	TET	TAL PEN

Client Sample ID: GWA-15

Lab Sample ID: 400-136790-7

Date Collected: 04/20/17 12:25

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	351340	04/26/17 08:00	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 15:57	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

Client Sample ID: GWA-16

Lab Sample ID: 400-136790-8

Date Collected: 04/20/17 13:20

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	351340	04/26/17 08:23	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:01	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: GWC-17

Lab Sample ID: 400-136790-9

Date Collected: 04/20/17 13:35

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	351340	04/26/17 08:46	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:06	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-136790-10

Date Collected: 04/20/17 14:45

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	351340	04/26/17 09:09	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:10	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

Client Sample ID: GWC-12

Lab Sample ID: 400-136790-11

Date Collected: 04/20/17 15:25

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 21:50	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:15	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

Client Sample ID: FERB-2

Lab Sample ID: 400-136790-12

Date Collected: 04/20/17 15:35

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 22:12	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:19	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Client Sample ID: FB-2

Lab Sample ID: 400-136790-13

Date Collected: 04/20/17 12:40

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 23:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:24	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-136790-14

Date Collected: 04/20/17 00:00

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	04/27/17 00:29	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:28	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

Client Sample ID: DUP-2

Lab Sample ID: 400-136790-15

Date Collected: 04/20/17 00:00

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	04/27/17 00:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:33	DRE	TAL PEN
Total/NA	Prep	7470A			351491	04/27/17 09:31	JAP	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 10:56	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

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

HPLC/IC

Analysis Batch: 351340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total/NA	Water	300.0	
400-136790-2	GWA-3	Total/NA	Water	300.0	
400-136790-3	GWA-5	Total/NA	Water	300.0	
400-136790-4	GWA-4R	Total/NA	Water	300.0	
400-136790-5	GWA-13	Total/NA	Water	300.0	
400-136790-6	GWA-14	Total/NA	Water	300.0	
400-136790-7	GWA-15	Total/NA	Water	300.0	
400-136790-8	GWA-16	Total/NA	Water	300.0	
400-136790-9	GWC-17	Total/NA	Water	300.0	
400-136790-10	GWC-1	Total/NA	Water	300.0	
MB 400-351340/38	Method Blank	Total/NA	Water	300.0	
LCS 400-351340/39	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-351340/40	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 351445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-11	GWC-12	Total/NA	Water	300.0	
400-136790-12	FERB-2	Total/NA	Water	300.0	
400-136790-13	FB-2	Total/NA	Water	300.0	
400-136790-14	DUP-1	Total/NA	Water	300.0	
400-136790-15	DUP-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	

Metals

Prep Batch: 351491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total/NA	Water	7470A	
400-136790-2	GWA-3	Total/NA	Water	7470A	
400-136790-3	GWA-5	Total/NA	Water	7470A	
400-136790-4	GWA-4R	Total/NA	Water	7470A	
400-136790-5	GWA-13	Total/NA	Water	7470A	
400-136790-6	GWA-14	Total/NA	Water	7470A	
400-136790-7	GWA-15	Total/NA	Water	7470A	
400-136790-8	GWA-16	Total/NA	Water	7470A	
400-136790-9	GWC-17	Total/NA	Water	7470A	
400-136790-10	GWC-1	Total/NA	Water	7470A	
400-136790-11	GWC-12	Total/NA	Water	7470A	
400-136790-12	FERB-2	Total/NA	Water	7470A	
400-136790-13	FB-2	Total/NA	Water	7470A	
400-136790-14	DUP-1	Total/NA	Water	7470A	
400-136790-15	DUP-2	Total/NA	Water	7470A	
MB 400-351491/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-351491/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-136790-1 MS	GWA-2	Total/NA	Water	7470A	
400-136790-1 MSD	GWA-2	Total/NA	Water	7470A	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Metals (Continued)

Analysis Batch: 352077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total/NA	Water	7470A	351491
400-136790-2	GWA-3	Total/NA	Water	7470A	351491
400-136790-3	GWA-5	Total/NA	Water	7470A	351491
400-136790-4	GWA-4R	Total/NA	Water	7470A	351491
400-136790-5	GWA-13	Total/NA	Water	7470A	351491
400-136790-6	GWA-14	Total/NA	Water	7470A	351491
400-136790-7	GWA-15	Total/NA	Water	7470A	351491
400-136790-8	GWA-16	Total/NA	Water	7470A	351491
400-136790-9	GWC-17	Total/NA	Water	7470A	351491
400-136790-10	GWC-1	Total/NA	Water	7470A	351491
400-136790-11	GWC-12	Total/NA	Water	7470A	351491
400-136790-12	FERB-2	Total/NA	Water	7470A	351491
400-136790-13	FB-2	Total/NA	Water	7470A	351491
400-136790-14	DUP-1	Total/NA	Water	7470A	351491
400-136790-15	DUP-2	Total/NA	Water	7470A	351491
MB 400-351491/14-A	Method Blank	Total/NA	Water	7470A	351491
LCS 400-351491/15-A	Lab Control Sample	Total/NA	Water	7470A	351491
400-136790-1 MS	GWA-2	Total/NA	Water	7470A	351491
400-136790-1 MSD	GWA-2	Total/NA	Water	7470A	351491

Prep Batch: 352433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total Recoverable	Water	3005A	
400-136790-2	GWA-3	Total Recoverable	Water	3005A	
400-136790-3	GWA-5	Total Recoverable	Water	3005A	
400-136790-4	GWA-4R	Total Recoverable	Water	3005A	
400-136790-5	GWA-13	Total Recoverable	Water	3005A	
400-136790-6	GWA-14	Total Recoverable	Water	3005A	
400-136790-7	GWA-15	Total Recoverable	Water	3005A	
400-136790-8	GWA-16	Total Recoverable	Water	3005A	
400-136790-9	GWC-17	Total Recoverable	Water	3005A	
400-136790-10	GWC-1	Total Recoverable	Water	3005A	
400-136790-11	GWC-12	Total Recoverable	Water	3005A	
400-136790-12	FERB-2	Total Recoverable	Water	3005A	
400-136790-13	FB-2	Total Recoverable	Water	3005A	
400-136790-14	DUP-1	Total Recoverable	Water	3005A	
400-136790-15	DUP-2	Total Recoverable	Water	3005A	
MB 400-352433/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-352433/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-136790-2 MS	GWA-3	Total Recoverable	Water	3005A	
400-136790-2 MSD	GWA-3	Total Recoverable	Water	3005A	

Analysis Batch: 352869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total Recoverable	Water	6020	352433
400-136790-2	GWA-3	Total Recoverable	Water	6020	352433
400-136790-3	GWA-5	Total Recoverable	Water	6020	352433
400-136790-4	GWA-4R	Total Recoverable	Water	6020	352433
400-136790-5	GWA-13	Total Recoverable	Water	6020	352433
400-136790-6	GWA-14	Total Recoverable	Water	6020	352433
400-136790-7	GWA-15	Total Recoverable	Water	6020	352433

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Metals (Continued)

Analysis Batch: 352869 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-8	GWA-16	Total Recoverable	Water	6020	352433
400-136790-9	GWC-17	Total Recoverable	Water	6020	352433
400-136790-10	GWC-1	Total Recoverable	Water	6020	352433
400-136790-11	GWC-12	Total Recoverable	Water	6020	352433
400-136790-12	FERB-2	Total Recoverable	Water	6020	352433
400-136790-13	FB-2	Total Recoverable	Water	6020	352433
400-136790-14	DUP-1	Total Recoverable	Water	6020	352433
400-136790-15	DUP-2	Total Recoverable	Water	6020	352433
MB 400-352433/1-A ^5	Method Blank	Total Recoverable	Water	6020	352433
LCS 400-352433/2-A	Lab Control Sample	Total Recoverable	Water	6020	352433
400-136790-2 MS	GWA-3	Total Recoverable	Water	6020	352433
400-136790-2 MSD	GWA-3	Total Recoverable	Water	6020	352433

General Chemistry

Analysis Batch: 351256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total/NA	Water	SM 2540C	
400-136790-2	GWA-3	Total/NA	Water	SM 2540C	
400-136790-3	GWA-5	Total/NA	Water	SM 2540C	
400-136790-4	GWA-4R	Total/NA	Water	SM 2540C	
400-136790-5	GWA-13	Total/NA	Water	SM 2540C	
400-136790-6	GWA-14	Total/NA	Water	SM 2540C	
MB 400-351256/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351256/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-136790-1 DU	GWA-2	Total/NA	Water	SM 2540C	

Analysis Batch: 351408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-7	GWA-15	Total/NA	Water	SM 2540C	
400-136790-8	GWA-16	Total/NA	Water	SM 2540C	
400-136790-9	GWC-17	Total/NA	Water	SM 2540C	
400-136790-10	GWC-1	Total/NA	Water	SM 2540C	
400-136790-11	GWC-12	Total/NA	Water	SM 2540C	
400-136790-12	FERB-2	Total/NA	Water	SM 2540C	
400-136790-13	FB-2	Total/NA	Water	SM 2540C	
400-136790-14	DUP-1	Total/NA	Water	SM 2540C	
400-136790-15	DUP-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	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-351340/38
Matrix: Water
Analysis Batch: 351340

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			04/25/17 22:52	1
Fluoride	<0.082		0.20	0.082	mg/L			04/25/17 22:52	1
Sulfate	<0.70		1.0	0.70	mg/L			04/25/17 22:52	1

Lab Sample ID: LCS 400-351340/39
Matrix: Water
Analysis Batch: 351340

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	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-351340/40
Matrix: Water
Analysis Batch: 351340

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	10.3		mg/L		103	90 - 110	0	15

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: 400-136790-1
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-352433/1-A ^5
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 14:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 14:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 14:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 14:36	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 14:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 14:36	5
Calcium	<0.13		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 14:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 14:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 14:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 14:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 14:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 14:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 14:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 14:36	5

Lab Sample ID: LCS 400-352433/2-A
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0521		mg/L		104	80 - 120
Arsenic	0.0500	0.0511		mg/L		102	80 - 120
Barium	0.0500	0.0484		mg/L		97	80 - 120
Beryllium	0.0500	0.0501		mg/L		100	80 - 120
Boron	0.100	0.104		mg/L		104	80 - 120
Cadmium	0.0500	0.0494		mg/L		99	80 - 120
Calcium	5.00	4.95		mg/L		99	80 - 120
Chromium	0.0500	0.0484		mg/L		97	80 - 120
Cobalt	0.0500	0.0544		mg/L		109	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Lithium	0.0500	0.0487		mg/L		97	80 - 120
Molybdenum	0.100	0.0956		mg/L		96	80 - 120
Selenium	0.0500	0.0505		mg/L		101	80 - 120
Thallium	0.0100	0.00922		mg/L		92	80 - 120

Lab Sample ID: 400-136790-2 MS
Matrix: Water
Analysis Batch: 352869

Client Sample ID: GWA-3
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0517		mg/L		103	75 - 125
Arsenic	0.00069	J	0.0500	0.0513		mg/L		101	75 - 125
Barium	0.013		0.0500	0.0608		mg/L		95	75 - 125
Beryllium	<0.00034		0.0500	0.0479		mg/L		96	75 - 125
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0480		mg/L		96	75 - 125
Calcium	0.69		5.00	5.54		mg/L		97	75 - 125
Chromium	0.0011	J	0.0500	0.0501		mg/L		100	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-136790-2 MS
Matrix: Water
Analysis Batch: 352869

Client Sample ID: GWA-3
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cobalt	<0.00040		0.0500	0.0508		mg/L		102	75 - 125
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125
Lithium	<0.0032		0.0500	0.0425		mg/L		85	75 - 125
Molybdenum	0.0036	J	0.100	0.0983		mg/L		95	75 - 125
Selenium	0.0020		0.0500	0.0522		mg/L		100	75 - 125
Thallium	<0.000085		0.0100	0.00916		mg/L		92	75 - 125

Lab Sample ID: 400-136790-2 MSD
Matrix: Water
Analysis Batch: 352869

Client Sample ID: GWA-3
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0518		mg/L		104	75 - 125	0	20
Arsenic	0.00069	J	0.0500	0.0514		mg/L		101	75 - 125	0	20
Barium	0.013		0.0500	0.0626		mg/L		99	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125	5	20
Boron	<0.021		0.100	0.113		mg/L		113	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0495		mg/L		99	75 - 125	3	20
Calcium	0.69		5.00	5.56		mg/L		97	75 - 125	0	20
Chromium	0.0011	J	0.0500	0.0510		mg/L		102	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0517		mg/L		103	75 - 125	2	20
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0430		mg/L		86	75 - 125	1	20
Molybdenum	0.0036	J	0.100	0.0977		mg/L		94	75 - 125	1	20
Selenium	0.0020		0.0500	0.0519		mg/L		100	75 - 125	1	20
Thallium	<0.000085		0.0100	0.00947		mg/L		95	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-351491/14-A
Matrix: Water
Analysis Batch: 352077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351491

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/27/17 09:16	05/02/17 09:58	1

Lab Sample ID: LCS 400-351491/15-A
Matrix: Water
Analysis Batch: 352077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351491

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000921		mg/L		91	80 - 120

Lab Sample ID: 400-136790-1 MS
Matrix: Water
Analysis Batch: 352077

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 351491

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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-1
 SDG: Landfill 4

Lab Sample ID: 400-136790-1 MSD
Matrix: Water
Analysis Batch: 352077

Client Sample ID: GWA-2
Prep Type: Total/NA
Prep Batch: 351491
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00182		mg/L		90	80 - 120	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-351256/1
Matrix: Water
Analysis Batch: 351256

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			04/25/17 15:20	1

Lab Sample ID: LCS 400-351256/2
Matrix: Water
Analysis Batch: 351256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	266		mg/L		91	78 - 122

Lab Sample ID: 400-136790-1 DU
Matrix: Water
Analysis Batch: 351256

Client Sample ID: GWA-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	14		14.0		mg/L		0	5

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

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:
 Lauren Potts
 Southern Company

Sampler:
 T. Payne 254 V. Thomas 752
 Phone:

Lab P/L:
 Whiting, Cherylene R
 E-Mail:
 cherylene.whiting@testamerica.com

Carrier Tracking Ref#: _____

GDC No: _____

Page: 1 of 1
 Job #: 400-136790

Address:
 42 Inverness Center Parkway
 City:

State, Zip:
 AL, 35242
 Phone:
 205-892-5417
 Email:
 lauren.potts@southernco.com

Project Name:
 Plant McIntosh - Landfill #4
 S/N:
 CCR

Due Date Requested:
 TAT Requested (days):

Analysis Requested

Preservation Codes:
 A - HCl
 B - NaOH
 C - 2% Acetic
 D - Nitric Acid
 E - Hydrochloric
 F - Methanol
 G - Ammonia
 H - Acetic Acid
 I - Nitrohydrofluoric
 J - BI Water
 K - EDTA
 L - EDA
 M - H2O2
 N - None
 O - NaOCl
 P - NaOCl
 Q - NaOCl
 R - NaOCl
 S - H2SO4
 T - TBP
 U - Acetic Acid
 V - Acetone
 W - HCl
 X - BI Water
 Y - HCl
 Z - other (specify)

Other:
 Special Instructions/Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Preserve, Break, Open, Wash, etc.)	Field Stored Sample (Yes or No)	Retention (Type or No)		Total Number of Analytes		Special Instructions/Notes
						I	D	I	D	
GWA-2	4/19/17	15:10	G	GW	X	X	X	X	X	
GWA-3	4/19/17	15:30	G	GW	X	X	X	X	X	

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Dispose By Lab Archive For _____ Month

Special Instructions/QC Requirements:

Date: 4/19/17 15:16
 Date Time: 4/19/17 15:16
 Date Time: 4/25/2017 8:47
 Date Time: 4/25/2017 8:47

Company: Southern Company
 Company: Southern Company
 Company: Southern Company

Method of shipment: _____
 Date Time: 4/25/2017 8:47
 Date Time: 4/25/2017 8:47

Cooler Temperature (0) To and Other Remarks: 0.0°C 18-2



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 3355 McLemore Drive
 Pensacola, FL 32514
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Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Sampler: T. Payne *[Signature]*; V. Thomas *[Signature]*; M. Thomas *[Signature]*; Whitmire, Chyenme R
 Lab PM: Whitmire, Chyenme R
 Client Contact: Lauren Petty
 Phone: chyenme.whitmire@testamericainc.com
 E-Mail: chyenme.whitmire@testamericainc.com
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 PO #: 205-992-5417
 Email: lmpetty@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Project #:
 SSOW#: CCR
 Site:

Carrier Tracking No(s):
 COC No:
 Page:
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Wastewater, BT-Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested			Total Number of Containers	Special Instructions/Note:
								TDS - SM 2540C; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320		
GWA-5	4/20/17	10:10	G	GW		X	X	D	D	3		
GWA-4R	4/20/17	10:25	G	GW		X	X	X		3		
GWA-13	4/20/17	11:15	G	GW		X	X	X		3		
GWA-14	4/20/17	11:40	G	GW		X	X	X		3		
GWA-15	4/20/17	12:25	G	GW		X	X	X		3		
GWA-16	4/20/17	13:20	G	GW		X	X	X		3		
GWC-17	4/20/17	13:35	G	GW		X	X	X		3		
GWC-1	4/20/17	14:45	G	GW		X	X	X		3		
GWC-12	4/20/17	15:25	G	GW		X	X	X		4	extra volume for radium analysis	
FEB-2	4/20/17	15:35	G	GW		X	X	X		3		
FB-2	4/20/17	12:40	G	GW		X	X	X		3		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiologic
 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 _____
 Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 4/21/2017 9:34 Company: ERM
 Relinquished by: _____ Date/Time: 4/21/2017 17:23 Company: TR SAN
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: Custody Seal No.: _____
 Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks: 5.0°C 12-1



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: T. Poyne 207; V. Thomas 720; M. Thomas 672; Whitmore, Cheyenne R
 Client Contact: Lauren Petty
 Lab P/N: E-Mail: cheyenne.whitmore@testamericainc.com
 Phone: 2 of 2
 Job #:

Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: jim.tetti@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Mercury, Lead, Cadmium, Chromium, PCBs, etc.)	Field Filtered Sample (Yes or No)		Perform Methods (Yes or No)		Special Instructions/Note:	
					Yes	No	Yes	No	Total Number of Containers	
DUP-1	4/20/17		G	GW			X	X	3	
DUP-2	4/20/17		G	GW			X	X	3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Radiochemical
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date/Time: 4-21-17 9:34 Company: SSW
 Relinquished by: _____ Date/Time: 4-21-17 0:00 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Operating Hours: 5.0°C 12-7



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136790-1

SDG Number: Landfill 4

Login Number: 136790

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-2; 5.0°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: 400-136790-1
 SDG: Landfill 4

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: 400-136790-2

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

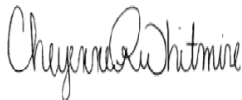
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/31/2017 4:19:59 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Job ID: 400-136790-2

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-136790-2**

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-306945. The following sample was reduced due to limited volume: GWC-12 (400-136790-11) and GWC-12 (400-136790-11[DU]).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-306924. The following sample was reduced due to limited volume: GWC-12 (400-136790-11) and GWC-12 (400-136790-11[DU]).

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
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- 10
- 11
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Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136790-1	GWA-2	Water	04/19/17 15:10	04/25/17 08:47
400-136790-2	GWA-3	Water	04/19/17 15:30	04/25/17 08:47
400-136790-3	GWA-5	Water	04/20/17 10:10	04/25/17 08:47
400-136790-4	GWA-4R	Water	04/20/17 10:25	04/25/17 08:47
400-136790-5	GWA-13	Water	04/20/17 11:15	04/25/17 08:47
400-136790-6	GWA-14	Water	04/20/17 11:40	04/25/17 08:47
400-136790-7	GWA-15	Water	04/20/17 12:25	04/25/17 08:47
400-136790-8	GWA-16	Water	04/20/17 13:20	04/25/17 08:47
400-136790-9	GWC-17	Water	04/20/17 13:35	04/25/17 08:47
400-136790-10	GWC-1	Water	04/20/17 14:45	04/25/17 08:47
400-136790-11	GWC-12	Water	04/20/17 15:25	04/25/17 08:47
400-136790-12	FERB-2	Water	04/20/17 15:35	04/25/17 08:47
400-136790-13	FB-2	Water	04/20/17 12:40	04/25/17 08:47
400-136790-14	DUP-1	Water	04/20/17 00:00	04/25/17 08:47
400-136790-15	DUP-2	Water	04/20/17 00:00	04/25/17 08:47

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-2
Date Collected: 04/19/17 15:10
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-1
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	0.461		0.127	0.134	1.00	0.103	pCi/L	04/26/17 08:13	05/18/17 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		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	0.282	U	0.220	0.222	1.00	0.348	pCi/L	04/26/17 08:54	05/11/17 14:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/26/17 08:54	05/11/17 14:45	1
Y Carrier	87.1		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	0.744		0.254	0.259	5.00	0.348	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Client Sample ID: GWA-3
Date Collected: 04/19/17 15:30
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-2
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	0.451		0.130	0.136	1.00	0.114	pCi/L	04/26/17 08:13	05/18/17 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		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	-0.00198	U	0.207	0.207	1.00	0.371	pCi/L	04/26/17 08:54	05/11/17 14:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					04/26/17 08:54	05/11/17 14:45	1
Y Carrier	88.2		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	0.449		0.244	0.248	5.00	0.371	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-5

Date Collected: 04/20/17 10:10

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-3

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	0.234		0.0988	0.101	1.00	0.111	pCi/L	05/03/17 10:22	05/25/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/17 10:22	05/25/17 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	0.286	U	0.224	0.226	1.00	0.356	pCi/L	05/03/17 11:14	05/16/17 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/17 11:14	05/16/17 12:47	1
Y Carrier	93.1		40 - 110					05/03/17 11:14	05/16/17 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	0.519		0.245	0.247	5.00	0.356	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-4R

Lab Sample ID: 400-136790-4

Date Collected: 04/20/17 10:25

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	0.111		0.0710	0.0717	1.00	0.0916	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/17 10:22	05/25/17 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	0.150	U	0.229	0.229	1.00	0.384	pCi/L	05/03/17 11:14	05/16/17 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/17 11:14	05/16/17 12:47	1
Y Carrier	93.5		40 - 110					05/03/17 11:14	05/16/17 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	0.261	U	0.240	0.240	5.00	0.384	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Client Sample ID: GWA-13

Lab Sample ID: 400-136790-5

Date Collected: 04/20/17 11:15

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	0.257		0.101	0.104	1.00	0.0986	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/03/17 10:22	05/25/17 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	0.0340	U	0.194	0.194	1.00	0.341	pCi/L	05/03/17 11:14	05/16/17 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/03/17 11:14	05/16/17 12:47	1
Y Carrier	89.3		40 - 110					05/03/17 11:14	05/16/17 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	0.291	U	0.218	0.220	5.00	0.341	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-14

Date Collected: 04/20/17 11:40

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-6

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.159		0.0814	0.0827	1.00	0.0927	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/17 10:22	05/25/17 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	-0.112	U	0.218	0.219	1.00	0.403	pCi/L	05/03/17 11:14	05/16/17 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/17 11:14	05/16/17 12:47	1
Y Carrier	89.3		40 - 110					05/03/17 11:14	05/16/17 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	0.0471	U	0.233	0.234	5.00	0.403	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Client Sample ID: GWA-15
Date Collected: 04/20/17 12:25
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-7
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	0.203		0.0945	0.0963	1.00	0.104	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					05/03/17 10:22	05/25/17 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	0.222	U	0.235	0.236	1.00	0.384	pCi/L	05/03/17 11:14	05/16/17 12:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					05/03/17 11:14	05/16/17 12:48	1
Y Carrier	90.1		40 - 110					05/03/17 11:14	05/16/17 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	0.425		0.253	0.255	5.00	0.384	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-16

Date Collected: 04/20/17 13:20

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-8

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	0.407		0.121	0.127	1.00	0.101	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					05/03/17 10:22	05/25/17 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	-0.0972	U	0.198	0.198	1.00	0.369	pCi/L	05/03/17 11:14	05/16/17 12:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					05/03/17 11:14	05/16/17 12:48	1
Y Carrier	90.5		40 - 110					05/03/17 11:14	05/16/17 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	0.310	U	0.232	0.235	5.00	0.369	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWC-17

Date Collected: 04/20/17 13:35

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-9

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	0.308		0.113	0.116	1.00	0.117	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					05/03/17 10:22	05/25/17 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	0.129	U	0.232	0.232	1.00	0.393	pCi/L	05/03/17 11:14	05/16/17 12:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					05/03/17 11:14	05/16/17 12:48	1
Y Carrier	92.0		40 - 110					05/03/17 11:14	05/16/17 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	0.437		0.258	0.260	5.00	0.393	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWC-1

Date Collected: 04/20/17 14:45

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-10

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	0.463		0.127	0.133	1.00	0.0968	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/03/17 10:22	05/25/17 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	0.660		0.256	0.263	1.00	0.361	pCi/L	05/03/17 11:14	05/16/17 12:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/03/17 11:14	05/16/17 12:48	1
Y Carrier	92.0		40 - 110					05/03/17 11:14	05/16/17 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	1.12		0.286	0.295	5.00	0.361	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWC-12

Date Collected: 04/20/17 15:25

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-11

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	0.250		0.155	0.156	1.00	0.201	pCi/L	05/03/17 10:22	05/25/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					05/03/17 10:22	05/25/17 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	-0.00715	U	0.390	0.390	1.00	0.696	pCi/L	05/03/17 11:14	05/16/17 12:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					05/03/17 11:14	05/16/17 12:48	1
Y Carrier	95.7		40 - 110					05/03/17 11:14	05/16/17 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	0.243	U	0.419	0.420	5.00	0.696	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: FERB-2

Lab Sample ID: 400-136790-12

Date Collected: 04/20/17 15:35

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	0.0252	U	0.0725	0.0726	1.00	0.133	pCi/L	05/03/17 10:22	05/25/17 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/03/17 10:22	05/25/17 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	0.0880	U	0.196	0.196	1.00	0.336	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	92.7		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.113	U	0.209	0.209	5.00	0.336	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: FB-2
Date Collected: 04/20/17 12:40
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-13
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	-0.0133	U	0.0468	0.0468	1.00	0.107	pCi/L	05/03/17 10:22	05/25/17 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/03/17 10:22	05/25/17 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	0.114	U	0.197	0.198	1.00	0.335	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	87.5		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.101	U	0.203	0.203	5.00	0.335	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Client Sample ID: DUP-1
Date Collected: 04/20/17 00:00
Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-14
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	0.249		0.106	0.109	1.00	0.122	pCi/L	05/03/17 10:22	05/25/17 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					05/03/17 10:22	05/25/17 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.123	U	0.202	0.202	1.00	0.342	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	89.3		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.372		0.228	0.230	5.00	0.342	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Client Sample ID: DUP-2

Date Collected: 04/20/17 00:00

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-15

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.423		0.124	0.130	1.00	0.107	pCi/L	05/03/17 10:22	05/25/17 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/03/17 10:22	05/25/17 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.253	U	0.247	0.248	1.00	0.402	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	92.0		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.676		0.277	0.280	5.00	0.402	pCi/L		05/26/17 12:36	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-2

Date Collected: 04/19/17 15:10

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-1

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 06:17	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	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWA-3

Date Collected: 04/19/17 15:30

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-2

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 06:17	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	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWA-5

Date Collected: 04/20/17 10:10

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWA-4R

Date Collected: 04/20/17 10:25

Date Received: 04/25/17 08:47

Lab Sample ID: 400-136790-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWA-13

Lab Sample ID: 400-136790-5

Date Collected: 04/20/17 11:15

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWA-14

Lab Sample ID: 400-136790-6

Date Collected: 04/20/17 11:40

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWA-15

Lab Sample ID: 400-136790-7

Date Collected: 04/20/17 12:25

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:48	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWA-16

Lab Sample ID: 400-136790-8

Date Collected: 04/20/17 13:20

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:48	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: GWC-17

Lab Sample ID: 400-136790-9

Date Collected: 04/20/17 13:35

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:48	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-136790-10

Date Collected: 04/20/17 14:45

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:48	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWC-12

Lab Sample ID: 400-136790-11

Date Collected: 04/20/17 15:25

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308831	05/16/17 12:48	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: FERB-2

Lab Sample ID: 400-136790-12

Date Collected: 04/20/17 15:35

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:17	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Client Sample ID: FB-2

Lab Sample ID: 400-136790-13

Date Collected: 04/20/17 12:40

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 06:17	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-136790-14

Date Collected: 04/20/17 00:00

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 09:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: DUP-2

Lab Sample ID: 400-136790-15

Date Collected: 04/20/17 00:00

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			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 09:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Rad

Prep Batch: 305643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total/NA	Water	PrecSep-21	
400-136790-2	GWA-3	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-A-11-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 305651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-1	GWA-2	Total/NA	Water	PrecSep_0	
400-136790-2	GWA-3	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-A-11-D DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 306924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-3	GWA-5	Total/NA	Water	PrecSep-21	
400-136790-4	GWA-4R	Total/NA	Water	PrecSep-21	
400-136790-5	GWA-13	Total/NA	Water	PrecSep-21	
400-136790-6	GWA-14	Total/NA	Water	PrecSep-21	
400-136790-7	GWA-15	Total/NA	Water	PrecSep-21	
400-136790-8	GWA-16	Total/NA	Water	PrecSep-21	
400-136790-9	GWC-17	Total/NA	Water	PrecSep-21	
400-136790-10	GWC-1	Total/NA	Water	PrecSep-21	
400-136790-11	GWC-12	Total/NA	Water	PrecSep-21	
400-136790-12	FERB-2	Total/NA	Water	PrecSep-21	
400-136790-13	FB-2	Total/NA	Water	PrecSep-21	
400-136790-14	DUP-1	Total/NA	Water	PrecSep-21	
400-136790-15	DUP-2	Total/NA	Water	PrecSep-21	
MB 160-306924/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-306924/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-136790-11 DU	GWC-12	Total/NA	Water	PrecSep-21	

Prep Batch: 306945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-3	GWA-5	Total/NA	Water	PrecSep_0	
400-136790-4	GWA-4R	Total/NA	Water	PrecSep_0	
400-136790-5	GWA-13	Total/NA	Water	PrecSep_0	
400-136790-6	GWA-14	Total/NA	Water	PrecSep_0	
400-136790-7	GWA-15	Total/NA	Water	PrecSep_0	
400-136790-8	GWA-16	Total/NA	Water	PrecSep_0	
400-136790-9	GWC-17	Total/NA	Water	PrecSep_0	
400-136790-10	GWC-1	Total/NA	Water	PrecSep_0	
400-136790-11	GWC-12	Total/NA	Water	PrecSep_0	
400-136790-12	FERB-2	Total/NA	Water	PrecSep_0	
400-136790-13	FB-2	Total/NA	Water	PrecSep_0	
400-136790-14	DUP-1	Total/NA	Water	PrecSep_0	
400-136790-15	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-306945/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-306945/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-136790-11 DU	GWC-12	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Rad (Continued)

Prep Batch: 306945 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-A-16-B DU	Duplicate	Total/NA	Water	PrecSep_0	

1

2

3

4

5

6

7

8

9

10

11

12

13

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

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 MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
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 MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	102					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	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	10.08		1.06	1.00	0.0875	pCi/L	89	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		40 - 110					
	104								

Lab Sample ID: 400-136772-A-11-B DU
Matrix: Water
Analysis Batch: 309197

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 305643

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					Limit
Radium-226	0.219		0.1778	U	0.151	1.00	0.222	pCi/L	0.16	1
Carrier	DU DU		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	57.8									

Lab Sample ID: MB 160-306924/1-A
Matrix: Water
Analysis Batch: 310494

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306924

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1059	U	0.0808	0.0814	1.00	0.118	pCi/L	05/03/17 10:22	05/25/17 06:15	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	99.1					05/03/17 10:22	05/25/17 06:15	1		

Lab Sample ID: LCS 160-306924/2-A
Matrix: Water
Analysis Batch: 310494

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306924

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	12.71		1.30	1.00	0.103	pCi/L	112	68 - 137

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-306924/2-A
Matrix: Water
Analysis Batch: 310494

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306924

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	103		40 - 110

Lab Sample ID: 400-136790-11 DU
Matrix: Water
Analysis Batch: 310494

Client Sample ID: GWC-12
Prep Type: Total/NA
Prep Batch: 306924

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.250		0.1965	U	0.146	1.00	0.203	pCi/L	0.18	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	98.5		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

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-A-11-D DU
Matrix: Water
Analysis Batch: 308225

Client Sample ID: Duplicate
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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
SDG: Landfill 4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 400-136772-A-11-D DU
Matrix: Water
Analysis Batch: 308225

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 305651

Carrier	<i>DU</i> %Yield	<i>DU</i> Qualifier	Limits
Ba Carrier	57.8		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: MB 160-306945/1-A
Matrix: Water
Analysis Batch: 308831

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306945

Analyte	<i>MB</i> Result	<i>MB</i> Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1454	U	0.247	0.248	1.00	0.417	pCi/L	05/03/17 11:14	05/16/17 12:47	1

Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110	05/03/17 11:14	05/16/17 12:47	1
Y Carrier	87.5		40 - 110	05/03/17 11:14	05/16/17 12:47	1

Lab Sample ID: LCS 160-306945/2-A
Matrix: Water
Analysis Batch: 308831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306945

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.4	13.89		1.47	1.00	0.363	pCi/L	103	56 - 140

Carrier	<i>LCS</i> %Yield	<i>LCS</i> Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	92.3		40 - 110

Lab Sample ID: 400-136790-11 DU
Matrix: Water
Analysis Batch: 308831

Client Sample ID: GWC-12
Prep Type: Total/NA
Prep Batch: 306945

Analyte	Sample Result	Sample Qual	<i>DU</i> Result	<i>DU</i> Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	-0.00715	U	0.2461	U	0.495	1.00	0.838	pCi/L	0.29	1

Carrier	<i>DU</i> %Yield	<i>DU</i> Qualifier	Limits
Ba Carrier	98.5		40 - 110
Y Carrier	91.2		40 - 110

Lab Sample ID: 400-136790-A-16-B DU
Matrix: Water
Analysis Batch: 308714

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 306945

Analyte	Sample Result	Sample Qual	<i>DU</i> Result	<i>DU</i> Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.161	U	0.1030	U	0.206	1.00	0.352	pCi/L	0.15	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-2
 SDG: Landfill 4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 400-136790-A-16-B DU
 Matrix: Water
 Analysis Batch: 308714

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 306945

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	87.5		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-136790-11 DU
 Matrix: Water
 Analysis Batch: 310927

Client Sample ID: GWC-12
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU		Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
			Result	Qual						
Combined Radium 226 + 228	0.243	U	0.4427	U	0.516	5.00	0.838	pCi/L	0.21	



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 - Landfill #4
 Site: CCR

Sampler: T. Payne *TP*; V. Thomas *VT*; M. Thomas *MT*; Whitmire, Chyenme R
Lab PM: Whitmire, Chyenme R
Carrier Tracking No(s):
Phone:
E-Mail: chyenme.whitmire@testamericainc.com
Company:
Address:
City:
State, Zip:
Phone:
PO #:
WO #:
Project #:
SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, B=biological, A=air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested			Total Number of Containers	Special Instructions/Note:
								TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320		
GWA-5	4/20/17	10:10	G	GW		X	X	D			3	
GWA-4R	4/20/17	10:25	G	GW		X	X				3	
GWA-13	4/20/17	11:15	G	GW		X	X				3	
GWA-14	4/20/17	11:40	G	GW		X	X				3	
GWA-15	4/20/17	12:25	G	GW		X	X				3	
GWA-16	4/20/17	13:20	G	GW		X	X				3	
GWC-17	4/20/17	13:35	G	GW		X	X				3	
GWC-1	4/20/17	14:45	G	GW		X	X				3	
GWC-12	4/20/17	15:25	G	GW		X	X				3	
FEB-2	4/20/17	15:35	G	GW		X	X				4	extra volume for radium analysis
FB-2	4/20/17	12:40	G	GW		X	X				3	

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Ancilor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Hexane
 N - None
 O - ASN02
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP
 U - Acetone
 V - MCAA
 W - ph 4.5
 X - other (specify)

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 Disposal By Lab Archive For _____
 Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____
Relinquished by: _____
Relinquished by: _____
Relinquished by: _____

Date: 4/21/2017 9:34
Date: 4/21/2017 9:34
Date: 4/21/2017 17:23
Date: 4/21/2017 17:23

Company: ERM
Company: ERM
Company: TR SEN
Company: TR SEN

Received by: _____
Received by: _____
Received by: _____

Date/Time: 4/21/2017 9:34
Date/Time: 4/21/2017 9:34
Date/Time: 4/21/2017 17:23
Date/Time: 4/21/2017 17:23

Method of Shipment: _____
Special Instructions/QC Requirements:

Cooler Temperature(s) °C and Other Remarks: 5.0°C 1R-7



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 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: T. Poyne 207; V. Thomas 727; M. Thomas 677 Whitmire, Cheyenne R
 Client Contact: Lauren Petty
 Phone: cheyenne.whitmire@testamericainc.com
 Lab P/N: E-Mail: cheyenne.whitmire@testamericainc.com
 COC No: 2 of 2
 Page: Job #:

Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: jim.tett@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Sediment, Air, etc)	Field Filtered Sample (Yes or No)	Perform Methods (Yes or No)	Special Instructions/Note:
DUP-1	4/20/17		G	GW		X	Radium 226 & 228 - SM-446 9315 & 9320 Metals - (Part 237 Appendix III & IV) EPA 6020 & EPA 7470 TDS - SM 2540C : Cl.F.504 - EPA 300
DUP-2	4/20/17		G	GW		X	

Preservation Codes:
 A - HCL
 B - NiOH
 C - Zn Acetate
 D - NiHCl Acid
 E - NaHSO4
 F - MeOH
 G - Anchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Hexane
 N - None
 O - AsHClO2
 P - Na2OAS
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)
 Other:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Radiochemical
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:
 Relinquished by: [Signature]
 Date/Time: 4-21-17 09:34
 Company: [Signature]
 Date/Time: 4-21-17 09:34
 Company: [Signature]

Custody Seal Intact: Custody Seal No.:
 A 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 _____ Month

Special Instructions/IOC Requirements:
 Cooler Temperature(s) °C and Operating marks:
 5.0°C 12-7



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136790-2

SDG Number: Landfill 4

Login Number: 136790

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-2; 5.0°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: 400-136790-2
SDG: Landfill 4

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: 400-136790-2
SDG: Landfill 4

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: 400-136790-3

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

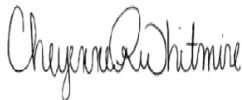
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/17/2017 9:09:10 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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Table of Contents

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Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-10

Lab Sample ID: 400-136790-16

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	0.18	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.064		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	14		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0053		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0037	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-136790-17

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	0.37		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.0		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0049		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lead	0.00037	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	46		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-136790-18

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
Sulfate	1.2		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	0.34		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

Client Sample ID: GWC-21

Lab Sample ID: 400-136790-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.95	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		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: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-21 (Continued)

Lab Sample ID: 400-136790-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0015	J	0.0025	0.00040	mg/L	5		6020	Total
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Recoverable 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: 400-136790-3
SDG: Landfill 4

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: 400-136790-3
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136790-16	GWC-10	Water	04/24/17 14:25	04/27/17 09:15
400-136790-17	GWC-11	Water	04/24/17 14:25	04/27/17 09:15
400-136790-18	GWC-9	Water	04/24/17 16:35	04/27/17 09:15
400-136790-19	GWC-21	Water	04/24/17 16:35	04/27/17 09:15

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-10

Date Collected: 04/24/17 14:25

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-16

Matrix: Water

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			04/28/17 21:10	1
Fluoride	0.18	J	0.20	0.082	mg/L			04/28/17 21:10	1
Sulfate	3.5		1.0	0.70	mg/L			04/28/17 21:10	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 16:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:51	5
Barium	0.014		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:51	5
Boron	0.064		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:51	5
Calcium	14		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:51	5
Chromium	0.0053		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:51	5
Lithium	0.0037	J	0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:51	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/08/17 14:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			04/29/17 14:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-11

Date Collected: 04/24/17 14:25

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-17

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			04/28/17 21:33	1
Fluoride	0.37		0.20	0.082	mg/L			04/28/17 21:33	1
Sulfate	4.0		1.0	0.70	mg/L			04/28/17 21:33	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 16:55	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 16:55	5
Barium	0.010		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 16:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:55	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 16:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 16:55	5
Calcium	8.8		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 16:55	5
Chromium	0.0049		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 16:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 16:55	5
Lead	0.00037	J	0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 16:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 16:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 16:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 16:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 16:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/08/17 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	46		5.0	3.4	mg/L			04/29/17 14:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-9

Date Collected: 04/24/17 16:35

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-18

Matrix: Water

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			04/28/17 21:56	1
Fluoride	<0.082		0.20	0.082	mg/L			04/28/17 21:56	1
Sulfate	1.2		1.0	0.70	mg/L			04/28/17 21:56	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 17:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 17:00	5
Barium	0.024		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 17:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 17:00	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 17:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 17:00	5
Calcium	0.34		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 17:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 17:00	5
Cobalt	0.00055 J		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 17:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 17:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 17:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 17:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 17:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 17:00	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/08/17 14:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/29/17 14:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-21

Date Collected: 04/24/17 16:35

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-19

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.9		1.0	0.89	mg/L			04/28/17 22:19	1
Fluoride	<0.082		0.20	0.082	mg/L			04/28/17 22:19	1
Sulfate	0.95	J	1.0	0.70	mg/L			04/28/17 22:19	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 17:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 17:04	5
Barium	0.015		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 17:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 17:04	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 17:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 17:04	5
Calcium	1.1		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 17:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 17:04	5
Cobalt	0.0015	J	0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 17:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 17:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 17:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 17:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 17:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 17:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/08/17 14:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			04/29/17 14:20	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

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.

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: 400-136790-3
SDG: Landfill 4

Client Sample ID: GWC-10

Date Collected: 04/24/17 14:25

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351674	04/28/17 21:10	KH1	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:51	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	TAL PEN

Client Sample ID: GWC-11

Date Collected: 04/24/17 14:25

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351674	04/28/17 21:33	KH1	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 16:55	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	TAL PEN

Client Sample ID: GWC-9

Date Collected: 04/24/17 16:35

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351674	04/28/17 21:56	KH1	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 17:00	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	TAL PEN

Client Sample ID: GWC-21

Date Collected: 04/24/17 16:35

Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351674	04/28/17 22:19	KH1	TAL PEN
Total Recoverable	Prep	3005A			352433	05/04/17 18:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352869	05/08/17 17:04	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

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: 400-136790-3
SDG: Landfill 4

HPLC/IC

Analysis Batch: 351674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total/NA	Water	300.0	
400-136790-17	GWC-11	Total/NA	Water	300.0	
400-136790-18	GWC-9	Total/NA	Water	300.0	
400-136790-19	GWC-21	Total/NA	Water	300.0	
MB 400-351674/4	Method Blank	Total/NA	Water	300.0	
LCS 400-351674/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-351674/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 352392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total/NA	Water	7470A	
400-136790-17	GWC-11	Total/NA	Water	7470A	
400-136790-18	GWC-9	Total/NA	Water	7470A	
400-136790-19	GWC-21	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	

Prep Batch: 352433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total Recoverable	Water	3005A	
400-136790-17	GWC-11	Total Recoverable	Water	3005A	
400-136790-18	GWC-9	Total Recoverable	Water	3005A	
400-136790-19	GWC-21	Total Recoverable	Water	3005A	
MB 400-352433/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-352433/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-136790-C-2-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-136790-C-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 352802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total/NA	Water	7470A	352392
400-136790-17	GWC-11	Total/NA	Water	7470A	352392
400-136790-18	GWC-9	Total/NA	Water	7470A	352392
400-136790-19	GWC-21	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

Analysis Batch: 352869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total Recoverable	Water	6020	352433
400-136790-17	GWC-11	Total Recoverable	Water	6020	352433
400-136790-18	GWC-9	Total Recoverable	Water	6020	352433
400-136790-19	GWC-21	Total Recoverable	Water	6020	352433
MB 400-352433/1-A ^5	Method Blank	Total Recoverable	Water	6020	352433

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Metals (Continued)

Analysis Batch: 352869 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-352433/2-A	Lab Control Sample	Total Recoverable	Water	6020	352433
400-136790-C-2-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	352433
400-136790-C-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	352433

General Chemistry

Analysis Batch: 351821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total/NA	Water	SM 2540C	
400-136790-17	GWC-11	Total/NA	Water	SM 2540C	
400-136790-18	GWC-9	Total/NA	Water	SM 2540C	
400-136790-19	GWC-21	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	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-351674/4
Matrix: Water
Analysis Batch: 351674

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 10:31	1
Fluoride	<0.082		0.20	0.082	mg/L			04/28/17 10:31	1
Sulfate	<0.70		1.0	0.70	mg/L			04/28/17 10:31	1

Lab Sample ID: LCS 400-351674/5
Matrix: Water
Analysis Batch: 351674

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.98		mg/L		100	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 400-351674/6
Matrix: Water
Analysis Batch: 351674

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.95		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	1	15
Sulfate	10.0	9.98		mg/L		100	90 - 110	0	15

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-352433/1-A ^5
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/17 18:27	05/08/17 14:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/17 18:27	05/08/17 14:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/04/17 18:27	05/08/17 14:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 14:36	5
Boron	<0.021		0.050	0.021	mg/L		05/04/17 18:27	05/08/17 14:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/17 18:27	05/08/17 14:36	5
Calcium	<0.13		0.25	0.13	mg/L		05/04/17 18:27	05/08/17 14:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/17 18:27	05/08/17 14:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/17 18:27	05/08/17 14:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/17 18:27	05/08/17 14:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/04/17 18:27	05/08/17 14:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/17 18:27	05/08/17 14:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/17 18:27	05/08/17 14:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/17 18:27	05/08/17 14:36	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-352433/2-A
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0521		mg/L		104	80 - 120
Arsenic	0.0500	0.0511		mg/L		102	80 - 120
Barium	0.0500	0.0484		mg/L		97	80 - 120
Beryllium	0.0500	0.0501		mg/L		100	80 - 120
Boron	0.100	0.104		mg/L		104	80 - 120
Cadmium	0.0500	0.0494		mg/L		99	80 - 120
Calcium	5.00	4.95		mg/L		99	80 - 120
Chromium	0.0500	0.0484		mg/L		97	80 - 120
Cobalt	0.0500	0.0544		mg/L		109	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Lithium	0.0500	0.0487		mg/L		97	80 - 120
Molybdenum	0.100	0.0956		mg/L		96	80 - 120
Selenium	0.0500	0.0505		mg/L		101	80 - 120
Thallium	0.0100	0.00922		mg/L		92	80 - 120

Lab Sample ID: 400-136790-C-2-C MS ^5
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0517		mg/L		103	75 - 125
Arsenic	0.00069	J	0.0500	0.0513		mg/L		101	75 - 125
Barium	0.013		0.0500	0.0608		mg/L		95	75 - 125
Beryllium	<0.00034		0.0500	0.0479		mg/L		96	75 - 125
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0480		mg/L		96	75 - 125
Calcium	0.69		5.00	5.54		mg/L		97	75 - 125
Chromium	0.0011	J	0.0500	0.0501		mg/L		100	75 - 125
Cobalt	<0.00040		0.0500	0.0508		mg/L		102	75 - 125
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125
Lithium	<0.0032		0.0500	0.0425		mg/L		85	75 - 125
Molybdenum	0.0036	J	0.100	0.0983		mg/L		95	75 - 125
Selenium	0.0020		0.0500	0.0522		mg/L		100	75 - 125
Thallium	<0.000085		0.0100	0.00916		mg/L		92	75 - 125

Lab Sample ID: 400-136790-C-2-D MSD ^5
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0518		mg/L		104	75 - 125	0	20
Arsenic	0.00069	J	0.0500	0.0514		mg/L		101	75 - 125	0	20
Barium	0.013		0.0500	0.0626		mg/L		99	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125	5	20
Boron	<0.021		0.100	0.113		mg/L		113	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0495		mg/L		99	75 - 125	3	20
Calcium	0.69		5.00	5.56		mg/L		97	75 - 125	0	20
Chromium	0.0011	J	0.0500	0.0510		mg/L		102	75 - 125	2	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-136790-C-2-D MSD ^5
Matrix: Water
Analysis Batch: 352869

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 352433

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	<0.00040		0.0500	0.0517		mg/L		103	75 - 125	2	20
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0430		mg/L		86	75 - 125	1	20
Molybdenum	0.0036	J	0.100	0.0977		mg/L		94	75 - 125	1	20
Selenium	0.0020		0.0500	0.0519		mg/L		100	75 - 125	1	20
Thallium	<0.000085		0.0100	0.00947		mg/L		95	75 - 125	3	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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				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	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00200		mg/L		99	80 - 120

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	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/29/17 14:20	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-3
 SDG: Landfill 4

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

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

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136790-3

SDG Number: Landfill 4

Login Number: 136790

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-2; 5.0°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: 400-136790-3
 SDG: Landfill 4

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
West Virginia DEP	State Program	3	136	06-30-17

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-136790-4

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

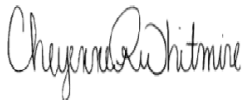
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/31/2017 4:45:13 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: 400-136790-4
SDG: Landfill 4

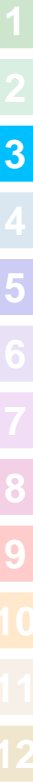
Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136790-16	GWC-10	Water	04/24/17 14:25	04/27/17 09:15
400-136790-17	GWC-11	Water	04/24/17 14:25	04/27/17 09:15
400-136790-18	GWC-9	Water	04/24/17 16:35	04/27/17 09:15
400-136790-19	GWC-21	Water	04/24/17 16:35	04/27/17 09:15

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Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
 SDG: Landfill 4

Client Sample ID: GWC-10

Lab Sample ID: 400-136790-16

Date Collected: 04/24/17 14:25

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	0.0540	U	0.0692	0.0694	1.00	0.115	pCi/L	05/03/17 10:22	05/25/17 09:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/03/17 10:22	05/25/17 09:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.161	U	0.188	0.189	1.00	0.310	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	89.3		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.215	U	0.201	0.201	5.00	0.310	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
 SDG: Landfill 4

Client Sample ID: GWC-11

Lab Sample ID: 400-136790-17

Date Collected: 04/24/17 14:25

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	0.0615	U	0.0650	0.0653	1.00	0.102	pCi/L	05/03/17 10:22	05/25/17 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/03/17 10:22	05/25/17 09:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.127	U	0.220	0.220	1.00	0.372	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	89.0		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.189	U	0.229	0.230	5.00	0.372	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
 SDG: Landfill 4

Client Sample ID: GWC-9
Date Collected: 04/24/17 16:35
Date Received: 04/27/17 09:15

Lab Sample ID: 400-136790-18
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.417		0.123	0.128	1.00	0.0960	pCi/L	05/03/17 10:22	05/25/17 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					05/03/17 10:22	05/25/17 09:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.290	U	0.217	0.218	1.00	0.340	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	88.6		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.707		0.249	0.253	5.00	0.340	pCi/L		05/26/17 12:36	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
 SDG: Landfill 4

Client Sample ID: GWC-21

Lab Sample ID: 400-136790-19

Date Collected: 04/24/17 16:35

Matrix: Water

Date Received: 04/27/17 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220		0.0953	0.0973	1.00	0.100	pCi/L	05/03/17 10:22	05/25/17 09:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					05/03/17 10:22	05/25/17 09:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0878	U	0.191	0.192	1.00	0.328	pCi/L	05/03/17 11:14	05/16/17 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					05/03/17 11:14	05/16/17 12:55	1
Y Carrier	90.1		40 - 110					05/03/17 11:14	05/16/17 12:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.308	U	0.214	0.215	5.00	0.328	pCi/L		05/26/17 12:36	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
SDG: Landfill 4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-136790-4
SDG: Landfill 4

Client Sample ID: GWC-10

Lab Sample ID: 400-136790-16

Date Collected: 04/24/17 14:25

Matrix: Water

Date Received: 04/27/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 09:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWC-11

Lab Sample ID: 400-136790-17

Date Collected: 04/24/17 14:25

Matrix: Water

Date Received: 04/27/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 09:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWC-9

Lab Sample ID: 400-136790-18

Date Collected: 04/24/17 16:35

Matrix: Water

Date Received: 04/27/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 09:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: GWC-21

Lab Sample ID: 400-136790-19

Date Collected: 04/24/17 16:35

Matrix: Water

Date Received: 04/27/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			306924	05/03/17 10:22	LDE	TAL SL
Total/NA	Analysis	9315		1	310494	05/25/17 09:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			306945	05/03/17 11:14	LDE	TAL SL
Total/NA	Analysis	9320		1	308714	05/16/17 12:55	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
 SDG: Landfill 4

Rad

Prep Batch: 306924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total/NA	Water	PrecSep-21	
400-136790-17	GWC-11	Total/NA	Water	PrecSep-21	
400-136790-18	GWC-9	Total/NA	Water	PrecSep-21	
400-136790-19	GWC-21	Total/NA	Water	PrecSep-21	
MB 160-306924/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-306924/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-136790-16 DU	GWC-10	Total/NA	Water	PrecSep-21	
400-136790-A-11-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 306945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136790-16	GWC-10	Total/NA	Water	PrecSep_0	
400-136790-17	GWC-11	Total/NA	Water	PrecSep_0	
400-136790-18	GWC-9	Total/NA	Water	PrecSep_0	
400-136790-19	GWC-21	Total/NA	Water	PrecSep_0	
MB 160-306945/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-306945/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-136790-16 DU	GWC-10	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
SDG: Landfill 4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-306924/1-A
Matrix: Water
Analysis Batch: 310494

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306924

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1059	U	0.0808	0.0814	1.00	0.118	pCi/L	05/03/17 10:22	05/25/17 06:15	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
Ba Carrier	99.1				05/03/17 10:22	05/25/17 06:15	1			

Lab Sample ID: LCS 160-306924/2-A
Matrix: Water
Analysis Batch: 310494

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306924

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	12.71		1.30	1.00	0.103	pCi/L	112	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	40 - 110						
Ba Carrier	103								

Lab Sample ID: 400-136790-16 DU
Matrix: Water
Analysis Batch: 310494

Client Sample ID: GWC-10
Prep Type: Total/NA
Prep Batch: 306924

Analyte	Sample Sample		DU DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0540	U	0.09895		0.0700	1.00	0.0936	pCi/L	0.32	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
Ba Carrier	98.8									

Lab Sample ID: 400-136790-A-11-A DU
Matrix: Water
Analysis Batch: 310494

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 306924

Analyte	Sample Sample		DU DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.250		0.1965	U	0.146	1.00	0.203	pCi/L	0.18	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
Ba Carrier	98.5									

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
SDG: Landfill 4

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-306945/1-A
Matrix: Water
Analysis Batch: 308831

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306945

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1454	U	0.247	0.248	1.00	0.417	pCi/L	05/03/17 11:14	05/16/17 12:47	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	99.1		40 - 110		05/03/17 11:14	05/16/17 12:47	1			
Y Carrier	87.5		40 - 110		05/03/17 11:14	05/16/17 12:47	1			

Lab Sample ID: LCS 160-306945/2-A
Matrix: Water
Analysis Batch: 308831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306945

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-228	13.4	13.89		1.47	1.00	0.363	pCi/L	103	56 - 140
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier							
Ba Carrier	103		40 - 110						
Y Carrier	92.3		40 - 110						

Lab Sample ID: 400-136790-16 DU
Matrix: Water
Analysis Batch: 308714

Client Sample ID: GWC-10
Prep Type: Total/NA
Prep Batch: 306945

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	0.161	U	0.1030	U	0.206	1.00	0.352	pCi/L	0.15	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	98.8		40 - 110							
Y Carrier	87.5		40 - 110							

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-136790-16 DU
Matrix: Water
Analysis Batch: 310927

Client Sample ID: GWC-10
Prep Type: Total/NA

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Combined Radium 226 + 228	0.215	U	0.2019	U	0.218	5.00	0.352	pCi/L	0.03	

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
 SDG: Landfill 4

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 (Continued)

Lab Sample ID: 400-136790-A-11 DU
 Matrix: Water
 Analysis Batch: 310927

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	0.243	U	0.4427	U	0.516	5.00	0.838	pCi/L	0.21	

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Chain of Custody Record



30000 McLeMere Drive
 Marietta, GA 30066
 Phone (850) 474-1001 Fax (850) 478-2671

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 - Landfill #4 Site: CCR		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 TDS - SM 2540C : Cl.F.S04 - EPA 300 Radium 226 & 228 - SW-846 9315 & 9320	
Preservation Codes: M - Hexane N - None O - AsMeO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP H - Ascorbic Acid Dodecahydrate U - Acetone V - MCAA W - ph. 4-5 L - EDTA Z - other (specify)		Special Instructions/Note: 4. extra volume for radium analysis	
Total Number of containers: 4		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 _____ Month	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant Deliverable Requested: I, II, III, (V) Other (specify)		Special Instructions/QC Requirements: *Request Level 4 Data Package	
Empty Kit Relinquished by:		Date: _____ Time: _____ Method of Shipment:	
Relinquished by: [Signature] Date/Time: 4/24/17 17:10 Company: TAL		Relinquished by: [Signature] Date/Time: 4/27/17 09:15 Company:	
Relinquished by: [Signature] Date/Time: _____ Company:		Relinquished by: [Signature] Date/Time: _____ Company:	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 1.35SE-1.7JAX1	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136790-4

SDG Number: Landfill 4

Login Number: 136790

List Source: TestAmerica Pensacola

List Number: 1

Creator: Siddoway, Benjamin

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-2; 5.0°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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-136790-4
SDG: Landfill 4

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: 400-136790-4
SDG: Landfill 4

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: 400-137064-1

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

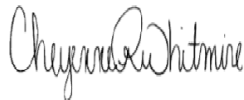
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/12/2017 5:01:41 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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Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

Client Sample ID: GWC-20

Lab Sample ID: 400-137064-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.2		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
Arsenic	0.00046	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0035	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0021		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-137064-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.4		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	1.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0019	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0019	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00052	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	62		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-18

Lab Sample ID: 400-137064-3

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	0.65		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	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0026		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0010	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Thallium	0.00012	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	92		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

Client Sample ID: GWC-23

Lab Sample ID: 400-137064-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00070	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.049		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0078		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-137064-5

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-137064-6

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: 400-137064-1
SDG: Landfill 4

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: 400-137064-1
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137064-1	GWC-20	Water	04/25/17 10:45	04/27/17 09:15
400-137064-2	GWC-19	Water	04/25/17 11:40	04/27/17 09:15
400-137064-3	GWC-18	Water	04/25/17 13:55	04/27/17 09:15
400-137064-4	GWC-23	Water	04/25/17 15:50	04/27/17 09:15
400-137064-5	FB-1	Water	04/25/17 13:40	04/27/17 09:15
400-137064-6	FERB-1	Water	04/25/17 13:50	04/27/17 09:15

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

Client Sample ID: GWC-20

Date Collected: 04/25/17 10:45

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.2		1.0	0.89	mg/L			04/29/17 06:41	1
Fluoride	<0.082		0.20	0.082	mg/L			04/29/17 06:41	1
Sulfate	1.3		1.0	0.70	mg/L			04/29/17 06:41	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/08/17 16:12	05/09/17 14:55	5
Arsenic	0.00046	J	0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 14:55	5
Barium	0.020		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 14:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 14:55	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 14:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 14:55	5
Calcium	1.4		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 14:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 14:55	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 14:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 14:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 14:55	5
Molybdenum	0.0035	J	0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 14:55	5
Selenium	0.0021		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 14:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 14:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/09/17 10:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		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: 400-137064-1
SDG: Landfill 4

Client Sample ID: GWC-19

Date Collected: 04/25/17 11:40

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.4		1.0	0.89	mg/L			04/29/17 07:04	1
Fluoride	0.087	J	0.20	0.082	mg/L			04/29/17 07:04	1
Sulfate	1.6		1.0	0.70	mg/L			04/29/17 07:04	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/08/17 16:12	05/09/17 15:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 15:18	5
Barium	0.015		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 15:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:18	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 15:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:18	5
Calcium	8.2		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 15:18	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 15:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 15:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 15:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 15:18	5
Molybdenum	0.0019	J	0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 15:18	5
Selenium	0.00052	J	0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 15:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 15:18	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/09/17 10:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	62		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: 400-137064-1
 SDG: Landfill 4

Client Sample ID: GWC-18

Date Collected: 04/25/17 13:55

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-3

Matrix: Water

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			04/29/17 07:26	1
Fluoride	0.65		0.20	0.082	mg/L			04/29/17 07:26	1
Sulfate	4.6		1.0	0.70	mg/L			04/29/17 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		05/08/17 16:12	05/09/17 15:22	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 15:22	5
Barium	0.020		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 15:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:22	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 15:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:22	5
Calcium	17		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 15:22	5
Chromium	0.0026		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 15:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 15:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 15:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 15:22	5
Molybdenum	0.0010	J	0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 15:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 15:22	5
Thallium	0.00012	J	0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 15:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/09/17 10:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		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: 400-137064-1
SDG: Landfill 4

Client Sample ID: GWC-23

Date Collected: 04/25/17 15:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-4

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			04/29/17 08:35	1
Fluoride	<0.082		0.20	0.082	mg/L			04/29/17 08:35	1
Sulfate	2.4		1.0	0.70	mg/L			04/29/17 08:35	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		05/08/17 16:12	05/09/17 15:27	5
Arsenic	0.00070	J	0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 15:27	5
Barium	0.049		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 15:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:27	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 15:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:27	5
Calcium	2.5		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 15:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 15:27	5
Cobalt	0.0078		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 15:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 15:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 15:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 15:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 15:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 15:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/09/17 11:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		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: 400-137064-1
SDG: Landfill 4

Client Sample ID: FB-1
Date Collected: 04/25/17 13:40
Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/29/17 08:58	1
Fluoride	<0.082		0.20	0.082	mg/L			04/29/17 08:58	1
Sulfate	<0.70		1.0	0.70	mg/L			04/29/17 08:58	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/08/17 16:12	05/09/17 15:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 15:49	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 15:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:49	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 15:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:49	5
Calcium	<0.13		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 15:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 15:49	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 15:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 15:49	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 15:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 15:49	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 15:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 15:49	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/09/17 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/29/17 15:11	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

Client Sample ID: FERB-1

Date Collected: 04/25/17 13:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/29/17 09:21	1
Fluoride	<0.082		0.20	0.082	mg/L			04/29/17 09:21	1
Sulfate	<0.70		1.0	0.70	mg/L			04/29/17 09:21	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/08/17 16:12	05/09/17 15:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 15:54	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 15:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:54	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 15:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:54	5
Calcium	<0.13		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 15:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 15:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 15:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 15:54	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 15:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 15:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 15:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 15:54	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/09/17 11:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/29/17 15:11	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

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.

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: 400-137064-1
SDG: Landfill 4

Client Sample ID: GWC-20

Date Collected: 04/25/17 10:45

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-1

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 06:41	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 14:55	DRE	TAL PEN
Total/NA	Prep	7470A			352397	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352945	05/09/17 10:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

Client Sample ID: GWC-19

Date Collected: 04/25/17 11:40

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-2

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 07:04	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 15:18	DRE	TAL PEN
Total/NA	Prep	7470A			352397	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352945	05/09/17 10:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

Client Sample ID: GWC-18

Date Collected: 04/25/17 13:55

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351751	04/29/17 07:26	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 15:22	DRE	TAL PEN
Total/NA	Prep	7470A			352397	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352945	05/09/17 10:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

Client Sample ID: GWC-23

Date Collected: 04/25/17 15:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351751	04/29/17 08:35	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 15:27	DRE	TAL PEN
Total/NA	Prep	7470A			352397	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352945	05/09/17 11:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

Client Sample ID: FB-1

Date Collected: 04/25/17 13:40

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351751	04/29/17 08:58	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 15:49	DRE	TAL PEN
Total/NA	Prep	7470A			352397	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352945	05/09/17 11:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

Client Sample ID: FERB-1

Date Collected: 04/25/17 13:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351751	04/29/17 09:21	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 15:54	DRE	TAL PEN
Total/NA	Prep	7470A			352397	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352945	05/09/17 11:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

HPLC/IC

Analysis Batch: 351751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total/NA	Water	300.0	
400-137064-2	GWC-19	Total/NA	Water	300.0	
400-137064-3	GWC-18	Total/NA	Water	300.0	
400-137064-4	GWC-23	Total/NA	Water	300.0	
400-137064-5	FB-1	Total/NA	Water	300.0	
400-137064-6	FERB-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	
LCSD 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: 352397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total/NA	Water	7470A	
400-137064-2	GWC-19	Total/NA	Water	7470A	
400-137064-3	GWC-18	Total/NA	Water	7470A	
400-137064-4	GWC-23	Total/NA	Water	7470A	
400-137064-5	FB-1	Total/NA	Water	7470A	
400-137064-6	FERB-1	Total/NA	Water	7470A	
MB 400-352397/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-352397/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-137351-D-1-E MS	Matrix Spike	Total/NA	Water	7470A	
400-137351-D-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 352816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total Recoverable	Water	3005A	
400-137064-2	GWC-19	Total Recoverable	Water	3005A	
400-137064-3	GWC-18	Total Recoverable	Water	3005A	
400-137064-4	GWC-23	Total Recoverable	Water	3005A	
400-137064-5	FB-1	Total Recoverable	Water	3005A	
400-137064-6	FERB-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	
400-137064-1 MS	GWC-20	Total Recoverable	Water	3005A	
400-137064-1 MSD	GWC-20	Total Recoverable	Water	3005A	

Analysis Batch: 352945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total/NA	Water	7470A	352397
400-137064-2	GWC-19	Total/NA	Water	7470A	352397
400-137064-3	GWC-18	Total/NA	Water	7470A	352397
400-137064-4	GWC-23	Total/NA	Water	7470A	352397
400-137064-5	FB-1	Total/NA	Water	7470A	352397
400-137064-6	FERB-1	Total/NA	Water	7470A	352397
MB 400-352397/14-A	Method Blank	Total/NA	Water	7470A	352397
LCS 400-352397/15-A	Lab Control Sample	Total/NA	Water	7470A	352397

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

Metals (Continued)

Analysis Batch: 352945 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137351-D-1-E MS	Matrix Spike	Total/NA	Water	7470A	352397
400-137351-D-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	352397

Analysis Batch: 353042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total Recoverable	Water	6020	352816
400-137064-2	GWC-19	Total Recoverable	Water	6020	352816
400-137064-3	GWC-18	Total Recoverable	Water	6020	352816
400-137064-4	GWC-23	Total Recoverable	Water	6020	352816
400-137064-5	FB-1	Total Recoverable	Water	6020	352816
400-137064-6	FERB-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
400-137064-1 MS	GWC-20	Total Recoverable	Water	6020	352816
400-137064-1 MSD	GWC-20	Total Recoverable	Water	6020	352816

General Chemistry

Analysis Batch: 351822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total/NA	Water	SM 2540C	
400-137064-2	GWC-19	Total/NA	Water	SM 2540C	
400-137064-3	GWC-18	Total/NA	Water	SM 2540C	
400-137064-4	GWC-23	Total/NA	Water	SM 2540C	
400-137064-5	FB-1	Total/NA	Water	SM 2540C	
400-137064-6	FERB-1	Total/NA	Water	SM 2540C	
MB 400-351822/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351822/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-137064-2 DU	GWC-19	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
SDG: Landfill 4

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: 400-137064-1
SDG: Landfill 4

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: 400-137064-1 MS
Matrix: Water
Analysis Batch: 353042

Client Sample ID: GWC-20
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: 400-137064-1
SDG: Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-137064-1 MS
Matrix: Water
Analysis Batch: 353042

Client Sample ID: GWC-20
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: 400-137064-1 MSD
Matrix: Water
Analysis Batch: 353042

Client Sample ID: GWC-20
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 400-352397/14-A
Matrix: Water
Analysis Batch: 352945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 352397

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	05/09/17 10:31	1

Lab Sample ID: LCS 400-352397/15-A
Matrix: Water
Analysis Batch: 352945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 352397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000978		mg/L		97	80 - 120

Lab Sample ID: 400-137351-D-1-E MS
Matrix: Water
Analysis Batch: 352945

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 352397

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00194		mg/L		96	80 - 120

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-1
 SDG: Landfill 4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-137351-D-1-F MSD
Matrix: Water
Analysis Batch: 352945

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 352397

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00196		mg/L		97	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

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: 400-137064-2 DU
Matrix: Water
Analysis Batch: 351822

Client Sample ID: GWC-19
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

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
 Client Contact: Lauren Petty
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State: AL, Zip: 35242
 Phone: 205-992-5417
 Email: lpetty@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

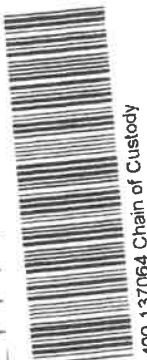
Sampler: C. Hurdle ☐; M. Thomas ☒
 Lab PM: Whitmire, Cheyenne R
 Phone: ☐
 E-Mail: cheyenne.whitmire@testamericainc.com

COC No:
 Page: 1 of 1
 Job #:

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSO#:

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - H₂SO₄
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:
 M - Hexane
 N - None
 O - AshtO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP
 U - Acetone
 V - MCAA
 W - ph 4-5
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp G=grab)	Matrix (Hydrotic, Swab, On-surface, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)			Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470			Total Number of Containers	Special Instructions/Note:
						Field Filtered	MS/MSD	Yes or No	TDS - SM 2540C: Cl, F, SO4 - EPA 300	I	D		
GWC-20	4/25/17	10:45	G	GW		X	X	X	X	X	X	3	
GWC-19	4/25/17	11:40	G	GW		X	X	X	X	X	X	3	
GWC-18	4/25/17	13:55	G	GW		X	X	X	X	X	X	3	
GWC-23	4/25/17	15:50	G	GW		X	X	X	X	X	X	3	
FB-1	4/25/17	13:40	G	GW		X	X	X	X	X	X	3	
FERB-1	4/25/17	13:50	G	GW		X	X	X	X	X	X	3	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Polysty B Uplifted 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: _____
 Relinquished by: _____ Date: _____

Company: _____ Date/Time: 4/26/17 10:34 AM
 Company: _____ Date/Time: 4/27/17 09:15
 Company: _____ Date/Time: _____

Custody Seal Intact: Yes No
 Custody Seal No.: 400137064
 Cooler Temperature (°C and Other Remarks): 7.1 (3.9 (5.9 2.7) 0.01X7



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137064-1

SDG Number: Landfill 4

Login Number: 137064

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: 400-137064-1
 SDG: Landfill 4

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: 400-144556-1

TestAmerica Sample Delivery Group: Plant McIntosh Landfill 4

Client Project/Site: CCR - Plant McIntosh

Sampling Event: Landfill #4 Bi-Monthly

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

10/29/2017 4:54:28 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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Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-2

Lab Sample ID: 400-144556-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.7		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	0.54		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4A

Lab Sample ID: 400-144556-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	7.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	0.80		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3

Lab Sample ID: 400-144556-3

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
Calcium	0.73		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-13

Lab Sample ID: 400-144556-4

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
Calcium	0.30		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-144556-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	3.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-14

Lab Sample ID: 400-144556-6

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
Calcium	0.49		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-16

Lab Sample ID: 400-144556-7

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
Calcium	0.40		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: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-16 (Continued)

Lab Sample ID: 400-144556-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-15

Lab Sample ID: 400-144556-8

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
Calcium	0.41		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-144556-9

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	1.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	2.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-17

Lab Sample ID: 400-144556-10

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	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	48		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11

Lab Sample ID: 400-144556-11

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	0.39		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.5		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-144556-12

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	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-144556-13

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	0.39		0.20	0.082	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: DUP-2 (Continued)

Lab Sample ID: 400-144556-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	9.8		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	62		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-144556-14

No Detections.

Client Sample ID: FB-1

Lab Sample ID: 400-144556-15

No Detections.

Client Sample ID: FB-2

Lab Sample ID: 400-144556-16

No Detections.

Client Sample ID: FERB-2

Lab Sample ID: 400-144556-17

No Detections.

Client Sample ID: GWC-12

Lab Sample ID: 400-144556-18

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
Calcium	0.76		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: GWC-19

Lab Sample ID: 400-144556-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.7		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	1.7		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	9.5		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: GWC-9

Lab Sample ID: 400-144556-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	0.21	J	0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: GWC-20

Lab Sample ID: 400-144556-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.1		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: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-20 (Continued)

Lab Sample ID: 400-144556-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-10

Lab Sample ID: 400-144556-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.0		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	2.7		1.0	0.70	mg/L	1		300.0	Total/NA
Boron	0.060		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-18

Lab Sample ID: 400-144556-23

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	0.60		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.0		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	14		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-21

Lab Sample ID: 400-144556-24

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
Sulfate	0.72	J	1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-23

Lab Sample ID: 400-144556-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.1		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

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: 400-144556-1
SDG: Plant McIntosh Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144556-1	GWA-2	Water	10/10/17 15:02	10/13/17 08:31
400-144556-2	GWA-4A	Water	10/10/17 15:05	10/13/17 08:31
400-144556-3	GWA-3	Water	10/11/17 10:50	10/13/17 08:31
400-144556-4	GWA-13	Water	10/11/17 11:00	10/13/17 08:31
400-144556-5	GWA-5	Water	10/11/17 11:03	10/13/17 08:31
400-144556-6	GWA-14	Water	10/11/17 12:30	10/13/17 08:31
400-144556-7	GWA-16	Water	10/11/17 12:28	10/13/17 08:31
400-144556-8	GWA-15	Water	10/11/17 12:40	10/13/17 08:31
400-144556-9	GWC-1	Water	10/11/17 14:15	10/13/17 08:31
400-144556-10	GWC-17	Water	10/11/17 14:30	10/13/17 08:31
400-144556-11	GWC-11	Water	10/11/17 15:05	10/13/17 08:31
400-144556-12	DUP-1	Water	10/11/17 00:00	10/13/17 08:31
400-144556-13	DUP-2	Water	10/11/17 00:00	10/13/17 08:31
400-144556-14	FERB-1	Water	10/11/17 15:00	10/13/17 08:31
400-144556-15	FB-1	Water	10/11/17 15:02	10/13/17 08:31
400-144556-16	FB-2	Water	10/11/17 15:20	10/13/17 08:31
400-144556-17	FERB-2	Water	10/11/17 15:25	10/13/17 08:31
400-144556-18	GWC-12	Water	10/12/17 10:45	10/13/17 08:31
400-144556-19	GWC-19	Water	10/12/17 10:47	10/13/17 08:31
400-144556-20	GWC-9	Water	10/12/17 11:00	10/13/17 08:31
400-144556-21	GWC-20	Water	10/12/17 12:30	10/13/17 08:31
400-144556-22	GWC-10	Water	10/12/17 13:05	10/13/17 08:31
400-144556-23	GWC-18	Water	10/12/17 13:23	10/13/17 08:31
400-144556-24	GWC-21	Water	10/12/17 14:45	10/13/17 08:31
400-144556-25	GWC-23	Water	10/12/17 15:15	10/13/17 08:31

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-2
Date Collected: 10/10/17 15:02
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.7		1.0	0.89	mg/L			10/24/17 04:24	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 04:24	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 04:24	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 13:13	10/19/17 13:07	5
Calcium	0.54		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 13:07	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			10/16/17 16:03	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-4A
Date Collected: 10/10/17 15:05
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-2
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			10/24/17 04:47	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 04:47	1
Sulfate	7.3		1.0	0.70	mg/L			10/24/17 04:47	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 13:13	10/19/17 13:52	5
Calcium	0.80		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 13:52	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			10/16/17 16:03	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-3
Date Collected: 10/11/17 10:50
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-3
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			10/24/17 05:10	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 05:10	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 05:10	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 13:13	10/19/17 13:57	5
Calcium	0.73		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 13:57	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-13
Date Collected: 10/11/17 11:00
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-4
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 05:56	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 05:56	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 05:56	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 13:13	10/19/17 14:01	5
Calcium	0.30		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:01	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			10/18/17 14:24	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-5

Date Collected: 10/11/17 11:03

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.2		1.0	0.89	mg/L			10/24/17 06:19	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 06:19	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 06:19	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 13:13	10/19/17 14:06	5
Calcium	3.3		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:06	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-14
Date Collected: 10/11/17 12:30
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-6
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			10/24/17 06:41	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 06:41	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 06:41	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 13:13	10/19/17 14:10	5
Calcium	0.49		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-16
Date Collected: 10/11/17 12:28
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-7
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			10/24/17 07:50	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 07:50	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 07:50	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 13:13	10/19/17 14:15	5
Calcium	0.40		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:15	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			10/18/17 14:24	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-15
Date Collected: 10/11/17 12:40
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-8
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			10/24/17 08:13	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 08:13	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 08:13	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 13:13	10/19/17 14:19	5
Calcium	0.41		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:19	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-1
Date Collected: 10/11/17 14:15
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-9
Matrix: Water

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			10/24/17 08:35	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 08:35	1
Sulfate	1.3		1.0	0.70	mg/L			10/24/17 08:35	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 13:13	10/19/17 14:24	5
Calcium	2.4		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:24	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			10/18/17 14:24	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-17
Date Collected: 10/11/17 14:30
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-10
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			10/24/17 08:58	1
Fluoride	0.11	J	0.20	0.082	mg/L			10/24/17 08:58	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 08:58	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 13:13	10/19/17 14:51	5
Calcium	2.1		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:51	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-11
Date Collected: 10/11/17 15:05
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-11
Matrix: Water

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			10/24/17 09:21	1
Fluoride	0.39		0.20	0.082	mg/L			10/24/17 09:21	1
Sulfate	4.5		1.0	0.70	mg/L			10/24/17 09:21	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 13:13	10/19/17 14:56	5
Calcium	10		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 14:56	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			10/18/17 14:24	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: DUP-1

Date Collected: 10/11/17 00:00

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-12

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			10/24/17 09:44	1
Fluoride	0.13	J	0.20	0.082	mg/L			10/24/17 09:44	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 09:44	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 13:13	10/19/17 15:00	5
Calcium	2.1		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:00	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			10/16/17 16:03	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: DUP-2

Date Collected: 10/11/17 00:00

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-13

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			10/24/17 12:01	1
Fluoride	0.39		0.20	0.082	mg/L			10/24/17 12:01	1
Sulfate	4.3		1.0	0.70	mg/L			10/24/17 12:01	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/15/17 13:13	10/19/17 15:05	5
Calcium	9.8		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:05	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	62		5.0	3.4	mg/L			10/16/17 16:03	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: FERB-1
Date Collected: 10/11/17 15:00
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-14
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/24/17 13:09	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 13:09	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 13:09	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/15/17 13:13	10/19/17 15:10	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: FB-1
Date Collected: 10/11/17 15:02
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-15
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/24/17 13:32	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 13:32	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 13:32	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 13:13	10/19/17 15:14	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:14	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: FB-2
Date Collected: 10/11/17 15:20
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-16
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/24/17 13:55	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 13:55	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 13:55	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 13:13	10/19/17 15:19	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:19	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/18/17 14:24	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: FERB-2

Date Collected: 10/11/17 15:25

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-17

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			10/24/17 14:18	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 14:18	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 14:18	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 13:13	10/19/17 15:23	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:23	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/18/17 14:24	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-12
Date Collected: 10/12/17 10:45
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-18
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			10/24/17 15:26	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 15:26	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 15:26	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 13:13	10/19/17 15:28	5
Calcium	0.76		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:28	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			10/19/17 16:01	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-19

Date Collected: 10/12/17 10:47

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-19

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.7		1.0	0.89	mg/L			10/24/17 15:49	1
Fluoride	0.087	J	0.20	0.082	mg/L			10/24/17 15:49	1
Sulfate	1.7		1.0	0.70	mg/L			10/24/17 15:49	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 13:13	10/19/17 15:33	5
Calcium	9.5		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 15:33	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			10/19/17 16:01	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-9
Date Collected: 10/12/17 11:00
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-20
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.8		1.0	0.89	mg/L			10/24/17 16:12	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 16:12	1
Sulfate	2.3		1.0	0.70	mg/L			10/24/17 16:12	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/15/17 13:13	10/19/17 16:00	5
Calcium	0.21	J	0.25	0.13	mg/L		10/15/17 13:13	10/19/17 16:00	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			10/19/17 16:01	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-20
Date Collected: 10/12/17 12:30
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-21
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.1		1.0	0.89	mg/L			10/24/17 16:35	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 16:35	1
Sulfate	1.1		1.0	0.70	mg/L			10/24/17 16:35	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 18:44	5
Calcium	1.7		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 18:44	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			10/19/17 16:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-10

Date Collected: 10/12/17 13:05

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-22

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.0		1.0	0.89	mg/L			10/24/17 16:58	1
Fluoride	0.18	J	0.20	0.082	mg/L			10/24/17 16:58	1
Sulfate	2.7		1.0	0.70	mg/L			10/24/17 16:58	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.060		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 18:49	5
Calcium	16		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 18:49	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			10/19/17 16:01	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-18
Date Collected: 10/12/17 13:23
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-23
Matrix: Water

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			10/24/17 17:20	1
Fluoride	0.60		0.20	0.082	mg/L			10/24/17 17:20	1
Sulfate	4.0		1.0	0.70	mg/L			10/24/17 17:20	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 18:53	5
Calcium	14		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 18:53	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			10/19/17 16:01	1



Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-21
Date Collected: 10/12/17 14:45
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-24
Matrix: Water

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			10/24/17 18:06	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 18:06	1
Sulfate	0.72	J	1.0	0.70	mg/L			10/24/17 18:06	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 18:58	5
Calcium	1.1		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 18:58	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			10/19/17 16:01	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-23

Date Collected: 10/12/17 15:15

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-25

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.3		1.0	0.89	mg/L			10/24/17 18:29	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 18:29	1
Sulfate	2.1		1.0	0.70	mg/L			10/24/17 18:29	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 19:02	5
Calcium	1.5		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 19:02	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			10/19/17 16:01	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-2

Date Collected: 10/10/17 15:02

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 04:24	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 13:07	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371996	10/16/17 16:03	RRC	TAL PEN

Client Sample ID: GWA-4A

Date Collected: 10/10/17 15:05

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 04:47	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 13:52	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371996	10/16/17 16:03	RRC	TAL PEN

Client Sample ID: GWA-3

Date Collected: 10/11/17 10:50

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 05:10	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 13:57	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWA-13

Date Collected: 10/11/17 11:00

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 05:56	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:01	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWA-5

Date Collected: 10/11/17 11:03

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 06:19	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWA-5

Date Collected: 10/11/17 11:03

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-5

Matrix: Water

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 14:06	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWA-14

Date Collected: 10/11/17 12:30

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 06:41	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:10	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWA-16

Date Collected: 10/11/17 12:28

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 07:50	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:15	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWA-15

Date Collected: 10/11/17 12:40

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 08:13	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:19	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWC-1

Date Collected: 10/11/17 14:15

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 08:35	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:24	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-17

Lab Sample ID: 400-144556-10

Date Collected: 10/11/17 14:30

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	372957	10/24/17 08:58	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:51	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWC-11

Lab Sample ID: 400-144556-11

Date Collected: 10/11/17 15:05

Matrix: Water

Date Received: 10/13/17 08:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 09:21	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 14:56	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-144556-12

Date Collected: 10/11/17 00:00

Matrix: Water

Date Received: 10/13/17 08:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372957	10/24/17 09:44	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:00	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371996	10/16/17 16:03	RRC	TAL PEN

Client Sample ID: DUP-2

Lab Sample ID: 400-144556-13

Date Collected: 10/11/17 00:00

Matrix: Water

Date Received: 10/13/17 08:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 12:01	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:05	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371996	10/16/17 16:03	RRC	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-144556-14

Date Collected: 10/11/17 15:00

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	373215	10/24/17 13:09	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: FERB-1

Date Collected: 10/11/17 15:00

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-14

Matrix: Water

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 15:10	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: FB-1

Date Collected: 10/11/17 15:02

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-15

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 13:32	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:14	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: FB-2

Date Collected: 10/11/17 15:20

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-16

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 13:55	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:19	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: FERB-2

Date Collected: 10/11/17 15:25

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-17

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 14:18	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:23	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372344	10/18/17 14:24	TET	TAL PEN

Client Sample ID: GWC-12

Date Collected: 10/12/17 10:45

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144556-18

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 15:26	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:28	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-19

Lab Sample ID: 400-144556-19

Date Collected: 10/12/17 10:47

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 15:49	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 15:33	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Client Sample ID: GWC-9

Lab Sample ID: 400-144556-20

Date Collected: 10/12/17 11:00

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	373215	10/24/17 16:12	JAW	TAL PEN
Total Recoverable	Prep	3005A			371936	10/15/17 13:13	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 16:00	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Client Sample ID: GWC-20

Lab Sample ID: 400-144556-21

Date Collected: 10/12/17 12:30

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 16:35	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 18:44	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Client Sample ID: GWC-10

Lab Sample ID: 400-144556-22

Date Collected: 10/12/17 13:05

Matrix: Water

Date Received: 10/13/17 08:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 16:58	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 18:49	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Client Sample ID: GWC-18

Lab Sample ID: 400-144556-23

Date Collected: 10/12/17 13:23

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 17:20	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: 400-144556-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-18

Lab Sample ID: 400-144556-23

Date Collected: 10/12/17 13:23

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 18:53	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Client Sample ID: GWC-21

Lab Sample ID: 400-144556-24

Date Collected: 10/12/17 14:45

Matrix: Water

Date Received: 10/13/17 08:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 18:06	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 18:58	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Client Sample ID: GWC-23

Lab Sample ID: 400-144556-25

Date Collected: 10/12/17 15:15

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 18:29	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 19:02	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372516	10/19/17 16:01	TET	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

HPLC/IC

Analysis Batch: 372957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-1	GWA-2	Total/NA	Water	300.0	
400-144556-2	GWA-4A	Total/NA	Water	300.0	
400-144556-3	GWA-3	Total/NA	Water	300.0	
400-144556-4	GWA-13	Total/NA	Water	300.0	
400-144556-5	GWA-5	Total/NA	Water	300.0	
400-144556-6	GWA-14	Total/NA	Water	300.0	
400-144556-7	GWA-16	Total/NA	Water	300.0	
400-144556-8	GWA-15	Total/NA	Water	300.0	
400-144556-9	GWC-1	Total/NA	Water	300.0	
400-144556-10	GWC-17	Total/NA	Water	300.0	
400-144556-11	GWC-11	Total/NA	Water	300.0	
400-144556-12	DUP-1	Total/NA	Water	300.0	
MB 400-372957/36	Method Blank	Total/NA	Water	300.0	
LCS 400-372957/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-372957/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144552-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-144552-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 373215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-13	DUP-2	Total/NA	Water	300.0	
400-144556-14	FERB-1	Total/NA	Water	300.0	
400-144556-15	FB-1	Total/NA	Water	300.0	
400-144556-16	FB-2	Total/NA	Water	300.0	
400-144556-17	FERB-2	Total/NA	Water	300.0	
400-144556-18	GWC-12	Total/NA	Water	300.0	
400-144556-19	GWC-19	Total/NA	Water	300.0	
400-144556-20	GWC-9	Total/NA	Water	300.0	
400-144556-21	GWC-20	Total/NA	Water	300.0	
400-144556-22	GWC-10	Total/NA	Water	300.0	
400-144556-23	GWC-18	Total/NA	Water	300.0	
400-144556-24	GWC-21	Total/NA	Water	300.0	
400-144556-25	GWC-23	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	
400-144556-13 MS	DUP-2	Total/NA	Water	300.0	
400-144556-13 MSD	DUP-2	Total/NA	Water	300.0	

Metals

Prep Batch: 371936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-1	GWA-2	Total Recoverable	Water	3005A	
400-144556-2	GWA-4A	Total Recoverable	Water	3005A	
400-144556-3	GWA-3	Total Recoverable	Water	3005A	
400-144556-4	GWA-13	Total Recoverable	Water	3005A	
400-144556-5	GWA-5	Total Recoverable	Water	3005A	
400-144556-6	GWA-14	Total Recoverable	Water	3005A	
400-144556-7	GWA-16	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Metals (Continued)

Prep Batch: 371936 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-8	GWA-15	Total Recoverable	Water	3005A	
400-144556-9	GWC-1	Total Recoverable	Water	3005A	
400-144556-10	GWC-17	Total Recoverable	Water	3005A	
400-144556-11	GWC-11	Total Recoverable	Water	3005A	
400-144556-12	DUP-1	Total Recoverable	Water	3005A	
400-144556-13	DUP-2	Total Recoverable	Water	3005A	
400-144556-14	FERB-1	Total Recoverable	Water	3005A	
400-144556-15	FB-1	Total Recoverable	Water	3005A	
400-144556-16	FB-2	Total Recoverable	Water	3005A	
400-144556-17	FERB-2	Total Recoverable	Water	3005A	
400-144556-18	GWC-12	Total Recoverable	Water	3005A	
400-144556-19	GWC-19	Total Recoverable	Water	3005A	
400-144556-20	GWC-9	Total Recoverable	Water	3005A	
MB 400-371936/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-371936/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-144556-1 MS	GWA-2	Total Recoverable	Water	3005A	
400-144556-1 MSD	GWA-2	Total Recoverable	Water	3005A	

Prep Batch: 371938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-21	GWC-20	Total Recoverable	Water	3005A	
400-144556-22	GWC-10	Total Recoverable	Water	3005A	
400-144556-23	GWC-18	Total Recoverable	Water	3005A	
400-144556-24	GWC-21	Total Recoverable	Water	3005A	
400-144556-25	GWC-23	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-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-144562-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 372643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-1	GWA-2	Total Recoverable	Water	6020	371936
400-144556-2	GWA-4A	Total Recoverable	Water	6020	371936
400-144556-3	GWA-3	Total Recoverable	Water	6020	371936
400-144556-4	GWA-13	Total Recoverable	Water	6020	371936
400-144556-5	GWA-5	Total Recoverable	Water	6020	371936
400-144556-6	GWA-14	Total Recoverable	Water	6020	371936
400-144556-7	GWA-16	Total Recoverable	Water	6020	371936
400-144556-8	GWA-15	Total Recoverable	Water	6020	371936
400-144556-9	GWC-1	Total Recoverable	Water	6020	371936
400-144556-10	GWC-17	Total Recoverable	Water	6020	371936
400-144556-11	GWC-11	Total Recoverable	Water	6020	371936
400-144556-12	DUP-1	Total Recoverable	Water	6020	371936
400-144556-13	DUP-2	Total Recoverable	Water	6020	371936
400-144556-14	FERB-1	Total Recoverable	Water	6020	371936
400-144556-15	FB-1	Total Recoverable	Water	6020	371936
400-144556-16	FB-2	Total Recoverable	Water	6020	371936
400-144556-17	FERB-2	Total Recoverable	Water	6020	371936
400-144556-18	GWC-12	Total Recoverable	Water	6020	371936
400-144556-19	GWC-19	Total Recoverable	Water	6020	371936

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Metals (Continued)

Analysis Batch: 372643 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-20	GWC-9	Total Recoverable	Water	6020	371936
400-144556-21	GWC-20	Total Recoverable	Water	6020	371938
400-144556-22	GWC-10	Total Recoverable	Water	6020	371938
400-144556-23	GWC-18	Total Recoverable	Water	6020	371938
400-144556-24	GWC-21	Total Recoverable	Water	6020	371938
400-144556-25	GWC-23	Total Recoverable	Water	6020	371938
MB 400-371936/1-A ^5	Method Blank	Total Recoverable	Water	6020	371936
MB 400-371938/1-A ^5	Method Blank	Total Recoverable	Water	6020	371938
LCS 400-371936/2-A	Lab Control Sample	Total Recoverable	Water	6020	371936
LCS 400-371938/2-A	Lab Control Sample	Total Recoverable	Water	6020	371938
400-144556-1 MS	GWA-2	Total Recoverable	Water	6020	371936
400-144556-1 MSD	GWA-2	Total Recoverable	Water	6020	371936
400-144562-B-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	371938
400-144562-B-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	371938

General Chemistry

Analysis Batch: 371996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-1	GWA-2	Total/NA	Water	SM 2540C	
400-144556-2	GWA-4A	Total/NA	Water	SM 2540C	
400-144556-12	DUP-1	Total/NA	Water	SM 2540C	
400-144556-13	DUP-2	Total/NA	Water	SM 2540C	
MB 400-371996/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-371996/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144551-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 372344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-3	GWA-3	Total/NA	Water	SM 2540C	
400-144556-4	GWA-13	Total/NA	Water	SM 2540C	
400-144556-5	GWA-5	Total/NA	Water	SM 2540C	
400-144556-6	GWA-14	Total/NA	Water	SM 2540C	
400-144556-7	GWA-16	Total/NA	Water	SM 2540C	
400-144556-8	GWA-15	Total/NA	Water	SM 2540C	
400-144556-9	GWC-1	Total/NA	Water	SM 2540C	
400-144556-10	GWC-17	Total/NA	Water	SM 2540C	
400-144556-11	GWC-11	Total/NA	Water	SM 2540C	
400-144556-14	FERB-1	Total/NA	Water	SM 2540C	
400-144556-15	FB-1	Total/NA	Water	SM 2540C	
400-144556-16	FB-2	Total/NA	Water	SM 2540C	
400-144556-17	FERB-2	Total/NA	Water	SM 2540C	
MB 400-372344/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372344/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144556-3 DU	GWA-3	Total/NA	Water	SM 2540C	
400-144556-11 DU	GWC-11	Total/NA	Water	SM 2540C	

Analysis Batch: 372516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-18	GWC-12	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

General Chemistry (Continued)

Analysis Batch: 372516 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144556-19	GWC-19	Total/NA	Water	SM 2540C	
400-144556-20	GWC-9	Total/NA	Water	SM 2540C	
400-144556-21	GWC-20	Total/NA	Water	SM 2540C	
400-144556-22	GWC-10	Total/NA	Water	SM 2540C	
400-144556-23	GWC-18	Total/NA	Water	SM 2540C	
400-144556-24	GWC-21	Total/NA	Water	SM 2540C	
400-144556-25	GWC-23	Total/NA	Water	SM 2540C	
MB 400-372516/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372516/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144556-19 DU	GWC-19	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-372957/36
Matrix: Water
Analysis Batch: 372957

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/23/17 22:42	1
Fluoride	<0.082		0.20	0.082	mg/L			10/23/17 22:42	1
Sulfate	<0.70		1.0	0.70	mg/L			10/23/17 22:42	1

Lab Sample ID: LCS 400-372957/37
Matrix: Water
Analysis Batch: 372957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.8		mg/L		108	90 - 110

Lab Sample ID: LCSD 400-372957/38
Matrix: Water
Analysis Batch: 372957

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.1		mg/L		101	90 - 110	0	15
Fluoride	10.0	10.7		mg/L		107	90 - 110	0	15
Sulfate	10.0	10.8		mg/L		108	90 - 110	0	15

Lab Sample ID: 400-144552-A-1 MS
Matrix: Water
Analysis Batch: 372957

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	4.6		10.0	14.3		mg/L		96	80 - 120
Fluoride	<0.082		10.0	10.7		mg/L		107	80 - 120
Sulfate	1.0		10.0	12.1		mg/L		110	80 - 120

Lab Sample ID: 400-144552-A-1 MSD
Matrix: Water
Analysis Batch: 372957

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	4.6		10.0	14.3		mg/L		97	80 - 120	0	20
Fluoride	<0.082		10.0	10.7		mg/L		107	80 - 120	0	20
Sulfate	1.0		10.0	12.1		mg/L		111	80 - 120	0	20

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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Method: 300.0 - Anions, Ion Chromatography (Continued)

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: 400-144556-13 MS
Matrix: Water
Analysis Batch: 373215

Client Sample ID: DUP-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	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: 400-144556-13 MSD
Matrix: Water
Analysis Batch: 373215

Client Sample ID: DUP-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	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

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-371936/1-A ^5
Matrix: Water
Analysis Batch: 372643

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 371936

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 13:13	10/19/17 12:53	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:13	10/19/17 12:53	5

Lab Sample ID: LCS 400-371936/2-A
Matrix: Water
Analysis Batch: 372643

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 371936

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.0983		mg/L		98	80 - 120
Calcium	5.00	5.16		mg/L		103	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-144556-1 MS

Matrix: Water

Analysis Batch: 372643

Client Sample ID: GWA-2

Prep Type: Total Recoverable

Prep Batch: 371936

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125
Calcium	0.54		5.00	5.71		mg/L		103	75 - 125

Lab Sample ID: 400-144556-1 MSD

Matrix: Water

Analysis Batch: 372643

Client Sample ID: GWA-2

Prep Type: Total Recoverable

Prep Batch: 371936

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	<0.021		0.100	0.116		mg/L		116	75 - 125	1	20
Calcium	0.54		5.00	5.77		mg/L		105	75 - 125	1	20

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	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-B-1-B MS ^5

Matrix: Water

Analysis Batch: 372643

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 371938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%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-B-1-C MSD ^5

Matrix: Water

Analysis Batch: 372643

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 371938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	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

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
SDG: Plant McIntosh Landfill 4

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-371996/1
Matrix: Water
Analysis Batch: 371996

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 16:03	1

Lab Sample ID: LCS 400-371996/2
Matrix: Water
Analysis Batch: 371996

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	252		mg/L		86	78 - 122

Lab Sample ID: 400-144551-A-3 DU
Matrix: Water
Analysis Batch: 371996

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		106		mg/L		0	5

Lab Sample ID: MB 400-372344/1
Matrix: Water
Analysis Batch: 372344

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/18/17 14:24	1

Lab Sample ID: LCS 400-372344/2
Matrix: Water
Analysis Batch: 372344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	280		mg/L		96	78 - 122

Lab Sample ID: 400-144556-3 DU
Matrix: Water
Analysis Batch: 372344

Client Sample ID: GWA-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	30		30.0		mg/L		0	5

Lab Sample ID: 400-144556-11 DU
Matrix: Water
Analysis Batch: 372344

Client Sample ID: GWC-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	88		88.0		mg/L		0	5

Lab Sample ID: MB 400-372516/1
Matrix: Water
Analysis Batch: 372516

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/19/17 16:01	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-144556-1
 SDG: Plant McIntosh Landfill 4

Lab Sample ID: LCS 400-372516/2
Matrix: Water
Analysis Batch: 372516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	276		mg/L		94	78 - 122

Lab Sample ID: 400-144556-19 DU
Matrix: Water
Analysis Batch: 372516

Client Sample ID: GWC-19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	38		38.0		mg/L		0	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

Sampler: H. Beaught, V. Thomas; P. Harold
Phone: _____
Lab PM: Whitmire, Cheyenne R
E-Mail: cheyenne.whitmire@testamericainc.com
Carrier Tracking No(s): _____
COC No: _____
Page: 1 of 3
Job #: _____

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 - LF4
Site: CCR

Due Date Requested: _____
TAT Requested (days): _____

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=biological, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Metals - (Part 257 Appendix III) EPA 6020; B & Ca	I	D	Total Number of Containers	Special Instructions/Note:	Preservation Codes:	
												A-HCL	M-Hexane
GWA-2	10/10/17	1502	G	W	N	N	N	1	1	2			
GWA-4A	10/10/17	1505	G	W	N	N	N	1	1	2			
GWA-3	10/11/17	1050	G	W	N	N	N	1	1	2			
GWA-13	10/11/17	1100	G	W	N	N	N	1	1	2			
GWA-5	10/11/17	1103	G	W	N	N	N	1	1	2			
GWA-14	10/11/17	1230	G	W	N	N	N	1	1	2			
GWA-16	10/11/17	1228	G	W	N	N	N	1	1	2			
GWA-15	10/11/17	1240	G	W	N	N	N	1	1	2			
GWC-1	10/11/17	1415	G	W	N	N	N	1	1	2			
GWC-17	10/11/17	1430	G	W	N	N	N	1	1	2			
GWC-11	10/11/17	1505	G	W	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) _____

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 17:30
 Relinquished by: _____ Date/Time: 10/13/17 08:31
 Relinquished by: _____ Date/Time: _____
 Company: _____
 Company: _____
 Company: _____

Custody Seal No.: _____
 Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: 0.5/1.7/2.1/0.5/1.4/0.3/0.6/1.4/2.5
 0.8/1.7

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: LIMPETTY@southernco.com
 Project Name: Plant McIntosh - LF4
 Site: CCR

Sampler: H. Beaught, V. Thomas, P. Harold, M. Thomas
 Lab PM: Whitmire, Cheyenne R
 Phone: cheyenne.whitmire@testamericainc.com
 E-Mail:

Carrier Tracking No(s):
 Page: 2 of 3
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Metals - (Part 257 Appendix III) EPA 6020, B & Ca	Total Number of Containers	Special Instructions/Note:	Analysis Requested	
										Preservation Code:	Preservation Codes:
DUP-1	10/11/17	--	G	W	N	N	I D	2			
DUP-2	10/11/17	--	G	W	N	N	I D	2			
FERB-1	10/11/17	1500	G	W	N	N	I D	2			
FB-1	10/11/17	1502	G	W	N	N	I D	2			
FB-2	10/11/17	1520	G	W	N	N	I D	2			
FERB-2	10/11/17	1525	G	W	N	N	I D	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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:

Relinquished by: [Signature] Date: 10-12-17 1730 Company: [Signature] Company
 Relinquished by: [Signature] Date: 10/13/17 0831 Company: [Signature] Company
 Relinquished by: [Signature] Date: _____ Company: _____ Company

Custody Seal No.: _____
 Custody Seals Intact: Yes No

Cooler Temperature(s) °C and Other Remarks:
 0.3/1.1/2.2/0.5/1.4/CCP+0.3/0.6/1.4/2.5
 0.8/1.7



TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Carrier Tracking No(s): _____
 Lab PM: Whitmire, Cheyenne R
 Sampler: H. Beaugh, V. Thomas, P. Harold
 Client Contact: Lauren Petty
 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 - LF4
 Site: CCR

Due Date Requested: _____
 TAT Requested (days): _____
 PO #: _____
 WO #: _____
 Project #: _____
 SSON#: _____

Sample Identification	Sample Date	Sample Time (C=Comp, G=grab)	Sample Type (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Matrix	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:	Analysis Requested	
										Preservation Codes:	Preservation Codes:
GWC-12	10/12/17	1045	G	W	N	N	I	2			
GWC-19	10/12/17	1047	G	W	N	N	I	2			
GWC-9	10/12/17	1100	G	W	N	N	I	2			
GWC-20	10/12/17	1230	G	W	N	N	I	2			
GWC-10	10/12/17	1305	G	W	N	N	I	2			
GWC-18	10/12/17	1323	G	W	N	N	I	2			
GWC-21	10/12/17	1445	G	W	N	N	I	2			
GWC-23	10/12/17	1515	G	W	N	N	I	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

Special Instructions/QC Requirements: _____

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 10-12-17 1730 Company: BEM
 Relinquished by: _____ Date/Time: 10/13/17 0831 Company: BEM
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No
 Copier Temperature(s) °C and Other Remarks: 0.311-12-274-5117 (CFE+0.3) CO. 6/14/12.5
 0.5/1157



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-144556-1
SDG Number: Plant McIntosh Landfill 4

Login Number: 144556

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, 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: 400-144556-1
SDG: Plant McIntosh Landfill 4

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

Report To Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

Sample #	Sample Description	Date Collected	Test Method
102936001	GWA-3, Water	4/19/2016 3:05:00 PM	Ga Tech
102936002	GWA-2, Water	4/19/2016 4:50:00 PM	Ga Tech
102936003	GWC-9, Water	4/19/2016 5:05:00 PM	Ga Tech
102936004	GWC-19, Water	4/19/2016 2:54:00 PM	Ga Tech
102936005	GWC-18, Water	4/19/2016 3:05:00 PM	Ga Tech

Certification

Data approved by Gary Smith
Georgia Power Company

Georgia Power Company
2480 Maner Road
Atlanta, Ga. 30339
(404) 799-2100 fax (404) 799-2141

Report To

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

Location
Sample Number
Collection Date
Sampling Media
Station

McIntosh
102936001
4/19/2016 3:05:00 PM
Water
GWA-3

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.55E-01
Ra-228	Ga Tech	pCi/L			6.02E-01

Georgia Power Company
2480 Maner Road
Atlanta, Ga. 30339
(404) 799-2100 fax (404) 799-2141

Report To

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

Location
Sample Number
Collection Date
Sampling Media
Station

McIntosh
102936002
4/19/2016 4:50:00 PM
Water
GWA-2

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.36E-01
Ra-228	Ga Tech	pCi/L			5.53E-01

Georgia Power Company
 2480 Maner Road
 Atlanta, Ga. 30339
 (404) 799-2100 fax (404) 799-2141

Report To Joju Abraham
 Southern Company Services
 Earth Sciences & Env Eng
 42 Inverness Center Parkway
 Birmingham, AL 35242

Location McIntosh
 Sample Number 102936003
 Collection Date 4/19/2016 5:05:00 PM
 Sampling Media Water
 Station GWC-9

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.23E-01
Ra-228	Ga Tech	pCi/L	1.58E+00	+/- 1.24E+00	
Total Isotopic Radium	Ga Tech	pCi/L	1.58E+00		

Georgia Power Company
 2480 Maner Road
 Atlanta, Ga. 30339
 (404) 799-2100 fax (404) 799-2141

Report To

Joju Abraham
 Southern Company Services
 Earth Sciences & Env Eng
 42 Inverness Center Parkway
 Birmingham, AL 35242

Location
 Sample Number
 Collection Date
 Sampling Media
 Station

McIntosh
 102936004
 4/19/2016 2:54:00 PM
 Water
 GWC-19

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.09E-01
Ra-228	Ga Tech	pCi/L			5.10E-01

Georgia Power Company
2480 Maner Road
Atlanta, Ga. 30339
(404) 799-2100 fax (404) 799-2141

Report To

Joju Abraham
Southern Company Services
Earth Sciences & Env Eng
42 Inverness Center Parkway
Birmingham, AL 35242

Location
Sample Number
Collection Date
Sampling Media
Station

McIntosh
102936005
4/19/2016 3:05:00 PM
Water
GWC-18

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.19E-01
Ra-228	Ga Tech	pCi/L			5.60E-01

Sample Receipt Checklist



Client: McIntosh **# of Samples:** 5
Workorder No.: 102936 **Tracking No:** 782874026654
Carrier: FEDEX

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler temperature is acceptable	True	
Cooler temperature is recorded	True	3.4
COC is present	True	
COC is filled out in ink and is legible	True	Mark through present on sample id GWA-3.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

QUALITY CONTROL DATA

Workorders: 102948, 102936, 102950

QC Batch: 16999

Analysis Method: Ga Tech

QC Batch Method: Ga Tech

Associated Lab Samples: 102948008--013, 102936001-005, 102950001-009

METHOD BLANK:

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Radium-226	pCi/l	<4.046E-01	1.0	
Radium-228	pCi/l	<6.382E-01	1.0	

Laboratory Control Sample:

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Radium-226	pCi/l	4.763	5.102	107	70-130	
Radium-228	pCi/l	4.878	5.172	106	70-130	

Laboratory Control Sample Duplicate:

Parameter	Units	RPD	Max RPD	Qualifiers
Radium-226	pCi/l	4.8	20	
Radium-228	pCi/l	0.94	20	

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Sample #	Sample Description	Date Collected	Test Method
102948001	GWC-4, Water	4/20/2016 10:47:00 AM	Ga Tech
102948002	GWC-13, Water	4/20/2016 1:38:00 PM	Ga Tech
102948003	DUP-1, Water	4/20/2016	Ga Tech
102948004	GWC -5, Water	4/20/2016 12:05:00 PM	Ga Tech
102948005	GWC -14, Water	4/20/2016 3:15:00 PM	Ga Tech
102948006	FB-1, Water	4/20/2016 4:40:00 PM	Ga Tech
102948007	FERB-1, Water	4/20/2016 4:50:00 PM	Ga Tech
102948008	GWC-16, Water	4/20/2016 11:30:00 AM	Ga Tech
102948009	GWC-1, Water	4/20/2016 2:20:00 PM	Ga Tech
102948010	DUP-2, Water	4/20/2016	Ga Tech
102948011	GWC-17, Water	4/20/2016 11:09:00 AM	Ga Tech
102948012	GWC-12, Water	4/20/2016 1:24:00 PM	Ga Tech
102948013	GWC-11, Water	4/20/2016 3:40:00 PM	Ga Tech

Certification

Data approved by Gary Smith
 Georgia Power Company

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Location McIntosh
 Sample Number 102948001
 Collection Date 4/20/2016 10:47:00 AM
 Sampling Media Water
 Station GWC-4

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.99E-01
Ra-228	Ga Tech	pCi/L			7.81E-01

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Location McIntosh
Sample Number 102948002
Collection Date 4/20/2016 1:38:00 PM
Sampling Media Water
Station GWC-13

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.61E-01
Ra-228	Ga Tech	pCi/L			4.29E-01

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Location McIntosh
 Sample Number 102948003
 Collection Date 4/20/2016
 Sampling Media Water
 Station DUP-1

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.95E-01
Ra-228	Ga Tech	pCi/L			7.39E-01

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Location McIntosh
 Sample Number 102948004
 Collection Date 4/20/2016 12:05:00 PM
 Sampling Media Water
 Station GWC -5

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.06E-01
Ra-228	Ga Tech	pCi/L			6.77E-01

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Location McIntosh
 Sample Number 102948005
 Collection Date 4/20/2016 3:15:00 PM
 Sampling Media Water
 Station GWC -14

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.27E-01
Ra-228	Ga Tech	pCi/L			5.09E-01

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Location McIntosh
 Sample Number 102948006
 Collection Date 4/20/2016 4:40:00 PM
 Sampling Media Water
 Station FB-1

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.56E-01
Ra-228	Ga Tech	pCi/L			5.87E-01

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Location McIntosh
 Sample Number 102948007
 Collection Date 4/20/2016 4:50:00 PM
 Sampling Media Water
 Station FERB-1

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.18E-01
Ra-228	Ga Tech	pCi/L			5.28E-01

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Location McIntosh
 Sample Number 102948008
 Collection Date 4/20/2016 11:30:00 AM
 Sampling Media Water
 Station GWC-16

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.70E-01
Ra-228	Ga Tech	pCi/L			8.40E-01

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Location McIntosh
 Sample Number 102948009
 Collection Date 4/20/2016 2:20:00 PM
 Sampling Media Water
 Station GWC-1

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.19E-01
Ra-228	Ga Tech	pCi/L			7.07E-01

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Location McIntosh
 Sample Number 102948010
 Collection Date 4/20/2016
 Sampling Media Water
 Station DUP-2

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.54E-01
Ra-228	Ga Tech	pCi/L			8.26E-01

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Location McIntosh
 Sample Number 102948011
 Collection Date 4/20/2016 11:09:00 AM
 Sampling Media Water
 Station GWC-17

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.87E-01
Ra-228	Ga Tech	pCi/L			4.91E-01

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Location McIntosh
 Sample Number 102948012
 Collection Date 4/20/2016 1:24:00 PM
 Sampling Media Water
 Station GWC-12

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.98E-01
Ra-228	Ga Tech	pCi/L			6.06E-01

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Location McIntosh
Sample Number 102948013
Collection Date 4/20/2016 3:40:00 PM
Sampling Media Water
Station GWC-11

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.03E-01
Ra-228	Ga Tech	pCi/L			6.59E-01

Georgia Power Environmental Laboratory
 2480 Maner Road, Bin 39110
 Atlanta, Georgia 30339
 Phone: (404) 799-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Case # 102945
 Sent ID: 20160420-03

Company: 1 Southern Company Services

Report To: Soju Abraham
 Address: 241 Ralph McGill Blvd SE Bldg 185
 Atlanta, GA 30308

Phone/Fax: 3 404-506-7239

Contact: 4 Soju Abraham

Project Location: 5 Plant McIntosh LFX4

Account Number: 6

Special Instructions: 7 McIntosh X4 CLR GW

Sample Shipment Date: 8 4/20/16

Sampled By: 9 Tracy Wards
 Signature: *Tracy Wards*
 Print Name: Tracy Wards

Sample Received Date: 10 4-21-16 @ 1030

Sample Received By: 11 *[Signature]*

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

LAB USE ONLY

Work Order No. 102945
 Reviewed By: *[Signature]*
 4-21-16

12 Page 1 of 1

13 Standard Turnaround Time

of Business Days (Rush)
 (Must be cleared through Env. Lab. prior to shipment)

PRESERVATIVE 21		ANALYSIS REQUESTED 22		Sample Type Key: 23	
W	I	N		G-Grab	C-Composite
W	I	N		Matrix Key: 24	
				C-Oil	SW-Surface Water
				S-Solid	GW-Ground Water
				SL-Sludge	VW-Waste Water
				W-Wipe	DW-Drinking Water
				LD-Liquid	DW-Other Water
				Preservative Key: 25	
				H-Hydrochloric Acid	
				N-Nitric Acid	
				S-Sulfuric Acid	
				SH-Sodium Hydroxide	
				P-Phosphoric Acid	
				ST-Sodium Thiosulfate	
				I-Ice	
				U-Unpreserved	
				O-Other (Specify)	
				LAB USE ONLY - 26	
				Comments	

18	19	20
Sample Type	Matrix	No. of Containers
G	GW	3
G	GW	3
G	GW	3

LAB USE ONLY 14 LAB ID	Sample Number 15	Collection 16 Date	Time	Sample Description 17	Matrix	No. of Containers
102945/011	GW-C-17	4/20/16	1109	Landfill X4	GW	3
12	GW-C-12	4/20/16	1324	Landfill X4	GW	3
13	GW-C-11	4/20/16	1540	Landfill X4	GW	3

FOR CHAIN OF CUSTODY USE ONLY 27		LAB USE ONLY: Sample Receipt Information 28	
Relinquished by: 28	Date/Time	3.8°C (69°F - TA-3P) ice, seal intact, cooler in good condition, #12	
<i>[Signature]</i>	4/20/16 1730		
Received by: 29	Date/Time	4-21-16 @ 1030	
<i>[Signature]</i>	4/21/16		
Relinquished by:	Date/Time		
	4/21/16		
Received by:	Date/Time		

Sample Receipt Checklist



Client: McIntosh
 Workorder No.: 102948
 Carrier: FEDEX

of Samples: 13
 Tracking No: 809398664232

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	3.8
COC is present	True	
COC is filled out in ink and is legible	True	Overwrite present on COC.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:



QUALITY CONTROL DATA

Workorders: 102832, 102932, 102948,

QC Batch: 16996

Analysis Method: Ga Tech

QC Batch Method: Ga Tech

Associated Lab Samples: 102832002-009, 102932001-005, 102948001-007

METHOD BLANK:

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Radium-226	pCi/l	<4.608E-01	1.0	
Radium-228	pCi/l	<6.912E-01	1.0	

Laboratory Control Sample:

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Radium-226	pCi/l	4.774	4.810	101	70-130	
Radium-228	pCi/l	4.875	4.974	102	70-130	

Laboratory Control Sample Duplicate:

Parameter	Units	RPD	Max RPD	Qualifiers
Radium-226	pCi/l	5.8	20	
Radium-228	pCi/l	0	20	

QUALITY CONTROL DATA

Workorders: 102948, 102936, 102950

QC Batch: 16999

Analysis Method: Ga Tech

QC Batch Method: Ga Tech

Associated Lab Samples: 102948008--013, 102936001-005, 102950001-009

METHOD BLANK:

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Radium-226	pCi/l	<4.046E-01	1.0	
Radium-228	pCi/l	<6.382E-01	1.0	

Laboratory Control Sample:

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Radium-226	pCi/l	4.763	5.102	107	70-130	
Radium-228	pCi/l	4.878	5.172	106	70-130	

Laboratory Control Sample Duplicate:

Parameter	Units	RPD	Max RPD	Qualifiers
Radium-226	pCi/l	4.8	20	
Radium-228	pCi/l	0.94	20	

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Sample #	Sample Description	Date Collected	Test Method
102975001	GWC -20, Water	4/21/2016 2:35:00 PM	Ga Tech
102975002	GWC -21, Water	4/21/2016 12:27:00 PM	Ga Tech
102975003	GWC -15, Water	4/21/2016 10:38:00 AM	Ga Tech
102975004	GWC -22, Water	4/21/2016 2:45:00 PM	Ga Tech
102975005	GWC -10, Water	4/21/2016 12:00:00 PM	Ga Tech
102975006	FB -2, Water	4/21/2016 3:15:00 PM	Ga Tech
102975007	FERB -2, Water	4/21/2016 3:20:00 PM	Ga Tech

Certification

Data approved by Gary Smith
Georgia Power Company

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Location McIntosh
Sample Number 102975001
Collection Date 4/21/2016 2:35:00 PM
Sampling Media Water
Station GWC -20

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.68E-01
Ra-228	Ga Tech	pCi/L			6.24E-01

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Location McIntosh
 Sample Number 102975002
 Collection Date 4/21/2016 12:27:00 PM
 Sampling Media Water
 Station GWC -21

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.76E-01
Ra-228	Ga Tech	pCi/L			6.92E-01

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Location McIntosh
Sample Number 102975003
Collection Date 4/21/2016 10:38:00 AM
Sampling Media Water
Station GWC -15

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			6.11E-01
Ra-228	Ga Tech	pCi/L			7.37E-01

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Location McIntosh
 Sample Number 102975004
 Collection Date 4/21/2016 2:45:00 PM
 Sampling Media Water
 Station GWC -22

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			4.96E-01
Ra-228	Ga Tech	pCi/L			5.20E-01

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Report To

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Location
 Sample Number
 Collection Date
 Sampling Media
 Station

McIntosh
 102975005
 4/21/2016 12:00:00 PM
 Water
 GWC -10

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			3.89E-01
Ra-228	Ga Tech	pCi/L			7.37E-01

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Location McIntosh
 Sample Number 102975006
 Collection Date 4/21/2016 3:15:00 PM
 Sampling Media Water
 Station FB -2

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.53E-01
Ra-228	Ga Tech	pCi/L			7.13E-01

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Location McIntosh
Sample Number 102975007
Collection Date 4/21/2016 3:20:00 PM
Sampling Media Water
Station FERB -2

Nuclide	Method	Units	Activity Mean	95% CL	MDA
Ra-226	Ga Tech	pCi/L			5.37E-01
Ra-228	Ga Tech	pCi/L			2.70E-01

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: 400-137064-2

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

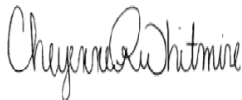
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/31/2017 4:21:28 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: 400-137064-2
SDG: Landfill 4

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137064-1	GWC-20	Water	04/25/17 10:45	04/27/17 09:15
400-137064-2	GWC-19	Water	04/25/17 11:40	04/27/17 09:15
400-137064-3	GWC-18	Water	04/25/17 13:55	04/27/17 09:15
400-137064-4	GWC-23	Water	04/25/17 15:50	04/27/17 09:15
400-137064-5	FB-1	Water	04/25/17 13:40	04/27/17 09:15
400-137064-6	FERB-1	Water	04/25/17 13:50	04/27/17 09:15

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Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
 SDG: Landfill 4

Client Sample ID: GWC-20

Date Collected: 04/25/17 10:45

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-1

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	0.177		0.0841	0.0856	1.00	0.0964	pCi/L	05/05/17 08:52	05/29/17 21:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/05/17 08:52	05/29/17 21:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0616	U	0.161	0.161	1.00	0.307	pCi/L	05/05/17 09:20	05/19/17 16:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/05/17 09:20	05/19/17 16:06	1
Y Carrier	86.7		40 - 110					05/05/17 09:20	05/19/17 16:06	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.116	U	0.182	0.183	5.00	0.307	pCi/L		05/31/17 14:25	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
 SDG: Landfill 4

Client Sample ID: GWC-19

Lab Sample ID: 400-137064-2

Date Collected: 04/25/17 11:40

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	0.0921	U	0.0677	0.0682	1.00	0.0977	pCi/L	05/05/17 08:52	05/29/17 21:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/05/17 08:52	05/29/17 21:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.109	U	0.166	0.166	1.00	0.324	pCi/L	05/05/17 09:20	05/19/17 16:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/05/17 09:20	05/19/17 16:06	1
Y Carrier	86.4		40 - 110					05/05/17 09:20	05/19/17 16:06	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0164	U	0.179	0.180	5.00	0.324	pCi/L		05/31/17 14:25	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
 SDG: Landfill 4

Client Sample ID: GWC-18

Lab Sample ID: 400-137064-3

Date Collected: 04/25/17 13:55

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	0.0560	U	0.0597	0.0599	1.00	0.0949	pCi/L	05/05/17 08:52	05/29/17 21:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					05/05/17 08:52	05/29/17 21:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0559	U	0.205	0.205	1.00	0.376	pCi/L	05/05/17 09:20	05/19/17 16:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					05/05/17 09:20	05/19/17 16:06	1
Y Carrier	89.0		40 - 110					05/05/17 09:20	05/19/17 16:06	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.000114	U	0.213	0.214	5.00	0.376	pCi/L		05/31/17 14:25	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
 SDG: Landfill 4

Client Sample ID: GWC-23

Date Collected: 04/25/17 15:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-4

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	0.134		0.0732	0.0742	1.00	0.0916	pCi/L	05/05/17 08:52	05/29/17 21:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/05/17 08:52	05/29/17 21:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.294	U	0.229	0.231	1.00	0.362	pCi/L	05/05/17 09:20	05/19/17 16:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/05/17 09:20	05/19/17 16:07	1
Y Carrier	86.0		40 - 110					05/05/17 09:20	05/19/17 16:07	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.429		0.241	0.242	5.00	0.362	pCi/L		05/31/17 14:25	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
 SDG: Landfill 4

Client Sample ID: FB-1
Date Collected: 04/25/17 13:40
Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-5
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	0.0157	U	0.0432	0.0432	1.00	0.0819	pCi/L	05/05/17 08:52	05/29/17 21:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					05/05/17 08:52	05/29/17 21:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0962	U	0.268	0.268	1.00	0.460	pCi/L	05/05/17 09:20	05/19/17 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					05/05/17 09:20	05/19/17 15:56	1
Y Carrier	81.5		40 - 110					05/05/17 09:20	05/19/17 15:56	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.112	U	0.271	0.271	5.00	0.460	pCi/L		05/31/17 14:25	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
 SDG: Landfill 4

Client Sample ID: FERB-1

Lab Sample ID: 400-137064-6

Date Collected: 04/25/17 13:50

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	0.0167	U	0.0420	0.0420	1.00	0.0794	pCi/L	05/05/17 08:52	05/29/17 21:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/05/17 08:52	05/29/17 21:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.187	U	0.265	0.265	1.00	0.442	pCi/L	05/05/17 09:20	05/19/17 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/05/17 09:20	05/19/17 15:56	1
Y Carrier	81.1		40 - 110					05/05/17 09:20	05/19/17 15:56	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.204	U	0.268	0.269	5.00	0.442	pCi/L		05/31/17 14:25	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
SDG: Landfill 4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-137064-2
SDG: Landfill 4

Client Sample ID: GWC-20

Date Collected: 04/25/17 10:45

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307416	05/05/17 08:52	LDE	TAL SL
Total/NA	Analysis	9315		1	310984	05/29/17 21:07	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307424	05/05/17 09:20	LDE	TAL SL
Total/NA	Analysis	9320		1	309639	05/19/17 16:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

Client Sample ID: GWC-19

Date Collected: 04/25/17 11:40

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307416	05/05/17 08:52	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:18	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307424	05/05/17 09:20	LDE	TAL SL
Total/NA	Analysis	9320		1	309639	05/19/17 16:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

Client Sample ID: GWC-18

Date Collected: 04/25/17 13:55

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307416	05/05/17 08:52	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:18	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307424	05/05/17 09:20	LDE	TAL SL
Total/NA	Analysis	9320		1	309639	05/19/17 16:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

Client Sample ID: GWC-23

Date Collected: 04/25/17 15:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307416	05/05/17 08:52	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:18	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307424	05/05/17 09:20	LDE	TAL SL
Total/NA	Analysis	9320		1	309639	05/19/17 16:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
SDG: Landfill 4

Client Sample ID: FB-1

Date Collected: 04/25/17 13:40

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307416	05/05/17 08:52	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:19	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307424	05/05/17 09:20	LDE	TAL SL
Total/NA	Analysis	9320		1	309641	05/19/17 15:56	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

Client Sample ID: FERB-1

Date Collected: 04/25/17 13:50

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137064-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307416	05/05/17 08:52	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:19	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307424	05/05/17 09:20	LDE	TAL SL
Total/NA	Analysis	9320		1	309641	05/19/17 15:56	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: 400-137064-2
SDG: Landfill 4

Rad

Prep Batch: 307416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total/NA	Water	PrecSep-21	
400-137064-2	GWC-19	Total/NA	Water	PrecSep-21	
400-137064-3	GWC-18	Total/NA	Water	PrecSep-21	
400-137064-4	GWC-23	Total/NA	Water	PrecSep-21	
400-137064-5	FB-1	Total/NA	Water	PrecSep-21	
400-137064-6	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-307416/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-307416/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-137272-A-4-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 307424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137064-1	GWC-20	Total/NA	Water	PrecSep_0	
400-137064-2	GWC-19	Total/NA	Water	PrecSep_0	
400-137064-3	GWC-18	Total/NA	Water	PrecSep_0	
400-137064-4	GWC-23	Total/NA	Water	PrecSep_0	
400-137064-5	FB-1	Total/NA	Water	PrecSep_0	
400-137064-6	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-307424/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-307424/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-137272-A-4-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
SDG: Landfill 4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-307416/1-A
Matrix: Water
Analysis Batch: 310984

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307416

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04826	U	0.0584	0.0585	1.00	0.0956	pCi/L	05/05/17 08:52	05/29/17 21:07	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/05/17 08:52	05/29/17 21:07	1

Lab Sample ID: LCS 160-307416/2-A
Matrix: Water
Analysis Batch: 310984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307416

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.889		1.03	1.00	0.121	pCi/L	87	68 - 137
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	105		40 - 110						

Lab Sample ID: 400-137272-A-4-A DU
Matrix: Water
Analysis Batch: 310981

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 307416

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.291		0.4991		0.130	1.00	0.0879	pCi/L	0.86	1
Carrier	%Yield	DU Qualifier	Limits							
Ba Carrier	100		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-307424/1-A
Matrix: Water
Analysis Batch: 309639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307424

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.05759	U	0.185	0.185	1.00	0.323	pCi/L	05/05/17 09:20	05/19/17 16:06	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/05/17 09:20	05/19/17 16:06	1
Y Carrier	89.3		40 - 110					05/05/17 09:20	05/19/17 16:06	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-137064-2
SDG: Landfill 4

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-307424/2-A
Matrix: Water
Analysis Batch: 309639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307424

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.4	13.22		1.42	1.00	0.325	pCi/L	98	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	89.3		40 - 110

Lab Sample ID: 400-137272-A-4-B DU
Matrix: Water
Analysis Batch: 309641

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 307424

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.384	U	0.9188		0.324	1.00	0.428	pCi/L	0.86	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	84.5		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	

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

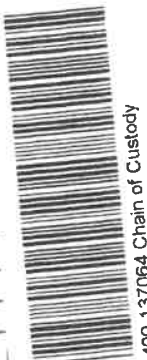
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
 Client Contact: Lauren Petty
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State: AL, Zip: 35242
 Phone: 205-992-5417
 Email: lpetty@southernco.com
 Project Name: Plant McIntosh - Landfill #4
 Site: CCR

Lab P.M.: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com
 Camer Tracking No(s):
 Page: 1 of 1
 Job #:

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp G=grab)	Matrix (Hydrocarbons, Metals, Organics, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)			Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470			Total Number of Containers	Special Instructions/Note:
						Field Filtered	MS/MSD	Yes or No	I	D	D		
GWC-20	4/25/17	10:45	G	GW		X	X	X				3	
GWC-19	4/25/17	11:40	G	GW		X	X	X				3	
GWC-18	4/25/17	13:55	G	GW		X	X	X				3	
GWC-23	4/25/17	15:50	G	GW		X	X	X				3	
FB-1	4/25/17	13:40	G	GW		X	X	X				3	
FERB-1	4/25/17	13:50	G	GW		X	X	X				3	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Polysorb B Uplifted 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: [Signature] Date: 4/26/17 Time: 10:34 AM Company: [Signature]
Relinquished by: [Signature] Date: 4/27/17 Time: 09:15 Company: [Signature]
Relinquished by: [Signature] Date: [] Time: [] Company: [Signature]
 Custody Seals Intact: Yes No Delta Custody Seal No.: 400137064 Cooler Temperature (°C and Other Remarks): 7.1 / 3.9 (5.9 2.7) 0.01X7



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137064-2

SDG Number: Landfill 4

Login Number: 137064

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: 400-137064-2
SDG: Landfill 4

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: 400-137064-2
SDG: Landfill 4

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: 400-140651-1

TestAmerica Sample Delivery Group: Landfill 4

Client Project/Site: CCR - Plant McIntosh

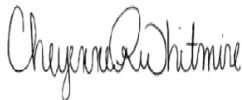
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/10/2017 4:08:08 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: 400-140651-1
SDG: Landfill 4

Job ID: 400-140651-1

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-140651-1**

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.



Detection Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
 SDG: Landfill 4

Client Sample ID: GWC-23

Lab Sample ID: 400-140651-1

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
Sulfate	2.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0061		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-140651-2

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
Sulfate	2.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0059		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-140651-3

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-140651-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00055	J	0.0025	0.00049	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: 400-140651-1
SDG: Landfill 4

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: 400-140651-1
SDG: Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140651-1	GWC-23	Water	07/13/17 15:05	07/13/17 17:30
400-140651-2	DUP-1	Water	07/13/17 00:00	07/13/17 17:30
400-140651-3	FB-1	Water	07/13/17 15:13	07/13/17 17:30
400-140651-4	FERB-1	Water	07/13/17 15:20	07/13/17 17:30

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
SDG: Landfill 4

Client Sample ID: GWC-23

Date Collected: 07/13/17 15:05

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-1

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 18:48	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 18:48	1
Sulfate	2.1		1.0	0.70	mg/L			07/20/17 18:48	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/24/17 07:30	07/28/17 11:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:14	5
Barium	0.040		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:14	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:14	5
Calcium	2.1		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:14	5
Cobalt	0.0061		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:37	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:14	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		07/21/17 10:43	07/24/17 12:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		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: 400-140651-1
 SDG: Landfill 4

Client Sample ID: DUP-1
Date Collected: 07/13/17 00:00
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-2
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 19:10	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 19:10	1
Sulfate	2.1		1.0	0.70	mg/L			07/20/17 19:10	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/24/17 07:30	07/28/17 11:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:19	5
Barium	0.040		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:19	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:19	5
Calcium	2.3		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:19	5
Cobalt	0.0059		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:42	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/21/17 10:43	07/24/17 12:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		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: 400-140651-1
SDG: Landfill 4

Client Sample ID: FB-1
Date Collected: 07/13/17 15:13
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/20/17 19:33	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 19:33	1
Sulfate	<0.70		1.0	0.70	mg/L			07/20/17 19:33	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/24/17 07:30	07/28/17 11:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:24	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:24	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:24	5
Calcium	<0.13		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:24	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:46	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:24	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		07/21/17 10:43	07/24/17 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/20/17 15:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
SDG: Landfill 4

Client Sample ID: FERB-1

Date Collected: 07/13/17 15:20

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-4

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 19:56	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 19:56	1
Sulfate	<0.70		1.0	0.70	mg/L			07/20/17 19:56	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/24/17 07:30	07/28/17 11:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:52	5
Barium	0.00055	J	0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:52	5
Calcium	<0.13		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:52	5
Lead	<0.00035	[^] *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:52	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	08/01/17 14:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	08/01/17 14:13	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		07/21/17 10:43	07/24/17 12:53	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: 400-140651-1
SDG: Landfill 4

Qualifiers

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	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: 400-140651-1
SDG: Landfill 4

Client Sample ID: GWC-23

Date Collected: 07/13/17 15:05

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-1

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 18:48	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 00:37	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 11:14	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 12:22	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: 400-140651-2

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 19:10	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 00:42	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 11:19	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 12:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: FB-1

Date Collected: 07/13/17 15:13

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-3

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 19:33	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 00:46	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 11:24	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 12:44	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: 400-140651-1
SDG: Landfill 4

Client Sample ID: FERB-1

Date Collected: 07/13/17 15:20

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361286	07/20/17 19:56	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 11:52	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020	RA	5	362686	08/01/17 14:13	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 12:53	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: 400-140651-1
SDG: Landfill 4

HPLC/IC

Analysis Batch: 361286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total/NA	Water	300.0	
400-140651-2	DUP-1	Total/NA	Water	300.0	
400-140651-3	FB-1	Total/NA	Water	300.0	
400-140651-4	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-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-140650-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 361306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total/NA	Water	7470A	
400-140651-2	DUP-1	Total/NA	Water	7470A	
400-140651-3	FB-1	Total/NA	Water	7470A	
400-140651-4	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	
400-140651-1 MS	GWC-23	Total/NA	Water	7470A	
400-140651-1 MSD	GWC-23	Total/NA	Water	7470A	

Prep Batch: 361436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total Recoverable	Water	3005A	
400-140651-2	DUP-1	Total Recoverable	Water	3005A	
400-140651-3	FB-1	Total Recoverable	Water	3005A	
400-140651-4 - RA	FERB-1	Total Recoverable	Water	3005A	
400-140651-4	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
400-140651-1	GWC-23	Total/NA	Water	7470A	361306
400-140651-2	DUP-1	Total/NA	Water	7470A	361306
400-140651-3	FB-1	Total/NA	Water	7470A	361306
400-140651-4	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
400-140651-1 MS	GWC-23	Total/NA	Water	7470A	361306
400-140651-1 MSD	GWC-23	Total/NA	Water	7470A	361306

Analysis Batch: 362368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total Recoverable	Water	6020	361436
400-140651-2	DUP-1	Total Recoverable	Water	6020	361436

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
SDG: Landfill 4

Metals (Continued)

Analysis Batch: 362368 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-3	FB-1	Total Recoverable	Water	6020	361436
400-140651-4	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

Analysis Batch: 362388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total Recoverable	Water	6020	361436
400-140651-2	DUP-1	Total Recoverable	Water	6020	361436
400-140651-3	FB-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

Analysis Batch: 362686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-4 - RA	FERB-1	Total Recoverable	Water	6020	361436

General Chemistry

Analysis Batch: 361149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total/NA	Water	SM 2540C	
400-140651-2	DUP-1	Total/NA	Water	SM 2540C	
400-140651-3	FB-1	Total/NA	Water	SM 2540C	
400-140651-4	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-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-140712-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
SDG: Landfill 4

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-A-1 MS
Matrix: Water
Analysis Batch: 361286

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.2		10.0	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-A-1 MSD
Matrix: Water
Analysis Batch: 361286

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.2		10.0	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: 400-140651-1
SDG: Landfill 4

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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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: MB 400-361436/1-A ^5
Matrix: Water
Analysis Batch: 362368

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		07/24/17 07:30	07/28/17 09:31	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 09:31	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 09:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 09:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 09:31	5
Calcium	<0.13		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 09:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 09:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/28/17 09:31	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 09:31	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 09:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 09:31	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 09:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 09:31	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	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
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

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
SDG: Landfill 4

Lab Sample ID: LCS 400-361436/2-A
Matrix: Water
Analysis Batch: 362368

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	0.0534		mg/L		107	80 - 120
Arsenic	0.0500	0.0514		mg/L		103	80 - 120
Barium	0.0500	0.0524		mg/L		105	80 - 120
Beryllium	0.0500	0.0531		mg/L		106	80 - 120
Cadmium	0.0500	0.0525		mg/L		105	80 - 120
Calcium	5.00	5.07		mg/L		101	80 - 120
Chromium	0.0500	0.0522		mg/L		104	80 - 120
Cobalt	0.0500	0.0441		mg/L		88	80 - 120
Lead	0.0500	0.0630	^ *	mg/L		126	80 - 120
Lithium	0.0500	0.0542		mg/L		108	80 - 120
Molybdenum	0.100	0.106		mg/L		106	80 - 120
Selenium	0.0500	0.0497		mg/L		99	80 - 120
Thallium	0.0100	0.0100		mg/L		100	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
Thallium	<0.00085		0.0100	0.00984		mg/L		98	75 - 125

Lab Sample ID: 400-140722-D-6-B MS ^5
Matrix: Water
Analysis Batch: 362368

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	0.0525		mg/L		105	75 - 125
Arsenic	0.087		0.0500	0.134		mg/L		95	75 - 125
Barium	0.088		0.0500	0.135		mg/L		94	75 - 125
Beryllium	<0.00034		0.0500	0.0522		mg/L		104	75 - 125
Boron	<0.021	^	0.100	0.110		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0526		mg/L		105	75 - 125
Calcium	2.6		5.00	7.41		mg/L		97	75 - 125
Chromium	<0.0011		0.0500	0.0530		mg/L		106	75 - 125
Lithium	<0.0032		0.0500	0.0463		mg/L		93	75 - 125
Molybdenum	<0.00085		0.100	0.0994		mg/L		99	75 - 125
Selenium	<0.00024		0.0500	0.0486		mg/L		97	75 - 125
Thallium	<0.00085		0.0100	0.0100		mg/L		100	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
SDG: Landfill 4

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	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
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

Lab Sample ID: 400-140722-D-6-C MSD ^5
Matrix: Water
Analysis Batch: 362368

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	2	20
Arsenic	0.087		0.0500	0.135		mg/L		96	75 - 125	0	20
Barium	0.088		0.0500	0.136		mg/L		96	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0530		mg/L		106	75 - 125	1	20
Boron	<0.021	^	0.100	0.109		mg/L		109	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	2	20
Calcium	2.6		5.00	7.52		mg/L		99	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0533		mg/L		107	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0481		mg/L		96	75 - 125	4	20
Molybdenum	<0.00085		0.100	0.0998		mg/L		100	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0491		mg/L		98	75 - 125	1	20
Thallium	<0.00085		0.0100	0.00987		mg/L		99	75 - 125	1	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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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	LCS	LCS	Unit	D	%Rec	%Rec.
		Added	Result				Qualifier
Mercury	0.00101	0.00106		mg/L		105	80 - 120

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-1
 SDG: Landfill 4

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-140651-1 MS
Matrix: Water
Analysis Batch: 361500

Client Sample ID: GWC-23
Prep Type: Total/NA
Prep Batch: 361306
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00215		mg/L		107	80 - 120

Lab Sample ID: 400-140651-1 MSD
Matrix: Water
Analysis Batch: 361500

Client Sample ID: GWC-23
Prep Type: Total/NA
Prep Batch: 361306
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	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	Limits
Total Dissolved Solids	293	274		mg/L		94	78 - 122

Lab Sample ID: 400-140650-A-1 DU
Matrix: Water
Analysis Batch: 361149

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	150		150		mg/L		0	5

Lab Sample ID: 400-140712-B-1 DU
Matrix: Water
Analysis Batch: 361149

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	50		50.0		mg/L		0	5

TestAmer Pensacola
 3355 McLemc...ve
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record



Carrier Tracking No(s): _____
 Lab PM: Whitmire, Cheyenne R
 Sampler: W. Virgo 4777 A. Ellis 4777
 Phone: _____ E-Mail: cheyenne.whitmire@testamericainc.com
 Job #: _____ of _____

Client Information
 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 - Landfill #4
 Site: CCR

Analysis Requested

Due Date Requested: _____
 TAT Requested (days): _____
 PO #: _____
 WO #: _____
 Project #: _____
 SSOW#: _____

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
GWC-23	7/13/17	1505	G	W	X	X				3	
DUP-1	7/13/17	—	G	W	X	X				3	
FB-1	7/13/17	1513	G	W	X	X				3	
FERB-1	7/13/17	1520	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) _____

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *Anthony Ellis* Date: 07/13/2017 1730 Company: _____

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: _____

Method of Shipment: _____

Received by: *Anthony Ellis* Date/Time: 7/13/17 17:30 Company: TA

Received by: *Jim DA* Date/Time: 7/20/17 0849 Company: TA

Received by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No

Custody Seal No.: 39C IR7 NH 1.06 IR7NH 1211.5C

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140651-1

SDG Number: Landfill 4

Login Number: 140651

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	1.5°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: 400-140651-1
SDG: Landfill 4

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: 400-140651-2

TestAmerica Sample Delivery Group: Plant McIntosh Landfill 4

Client Project/Site: CCR - Plant McIntosh

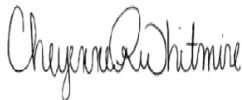
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/15/2017 5:37:28 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: 400-140651-2
SDG: Plant McIntosh Landfill 4

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
SDG: Plant McIntosh Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140651-1	GWC-23	Water	07/13/17 15:05	07/13/17 17:30
400-140651-2	DUP-1	Water	07/13/17 00:00	07/13/17 17:30
400-140651-3	FB-1	Water	07/13/17 15:13	07/13/17 17:30
400-140651-4	FERB-1	Water	07/13/17 15:20	07/13/17 17:30

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Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
 SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-23

Date Collected: 07/13/17 15:05

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-1

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	0.143		0.0796	0.0806	1.00	0.0942	pCi/L	07/24/17 08:07	08/15/17 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/24/17 08:07	08/15/17 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.308		0.172	0.174	1.00	0.252	pCi/L	07/24/17 08:48	08/07/17 12:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/24/17 08:48	08/07/17 12:34	1
Y Carrier	104		40 - 110					07/24/17 08:48	08/07/17 12:34	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.450		0.189	0.192	5.00	0.252	pCi/L		08/15/17 14:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
SDG: Plant McIntosh Landfill 4

Client Sample ID: DUP-1
Date Collected: 07/13/17 00:00
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-2
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	0.320		0.111	0.114	1.00	0.103	pCi/L	07/24/17 08:07	08/15/17 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					07/24/17 08:07	08/15/17 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.280	U	0.216	0.217	1.00	0.342	pCi/L	07/24/17 08:48	08/07/17 12:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					07/24/17 08:48	08/07/17 12:34	1
Y Carrier	106		40 - 110					07/24/17 08:48	08/07/17 12:34	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.600		0.242	0.245	5.00	0.342	pCi/L		08/15/17 14:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
 SDG: Plant McIntosh Landfill 4

Client Sample ID: FB-1
Date Collected: 07/13/17 15:13
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-3
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	0.0869	U	0.0703	0.0708	1.00	0.100	pCi/L	07/24/17 08:07	08/15/17 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					07/24/17 08:07	08/15/17 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.199	U	0.193	0.194	1.00	0.314	pCi/L	07/24/17 08:48	08/07/17 12:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					07/24/17 08:48	08/07/17 12:35	1
Y Carrier	104		40 - 110					07/24/17 08:48	08/07/17 12:35	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.286	U	0.206	0.207	5.00	0.314	pCi/L		08/15/17 14:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
 SDG: Plant McIntosh Landfill 4

Client Sample ID: FERB-1

Date Collected: 07/13/17 15:20

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-4

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	0.00250	U	0.0631	0.0631	1.00	0.128	pCi/L	07/24/17 08:07	08/15/17 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/24/17 08:07	08/15/17 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.273	U	0.187	0.188	1.00	0.288	pCi/L	07/24/17 08:48	08/07/17 12:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/24/17 08:48	08/07/17 12:35	1
Y Carrier	102		40 - 110					07/24/17 08:48	08/07/17 12:35	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.276	U	0.197	0.199	5.00	0.288	pCi/L		08/15/17 14:52	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
SDG: Plant McIntosh Landfill 4

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-140651-2
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-23

Date Collected: 07/13/17 15:05

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318731	07/24/17 08:07	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 06:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318739	07/24/17 08:48	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 12:34	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: 400-140651-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318731	07/24/17 08:07	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 06:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318739	07/24/17 08:48	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 12:34	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 15:13

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318731	07/24/17 08:07	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 06:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318739	07/24/17 08:48	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 12:35	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: FERB-1

Date Collected: 07/13/17 15:20

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140651-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318731	07/24/17 08:07	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 06:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318739	07/24/17 08:48	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 12:35	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: 400-140651-2
 SDG: Plant McIntosh Landfill 4

Rad

Prep Batch: 318731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total/NA	Water	PrecSep-21	
400-140651-2	DUP-1	Total/NA	Water	PrecSep-21	
400-140651-3	FB-1	Total/NA	Water	PrecSep-21	
400-140651-4	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-318731/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-318731/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-82372-A-6-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
240-82372-A-6-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 318739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140651-1	GWC-23	Total/NA	Water	PrecSep_0	
400-140651-2	DUP-1	Total/NA	Water	PrecSep_0	
400-140651-3	FB-1	Total/NA	Water	PrecSep_0	
400-140651-4	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-318739/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-318739/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-82372-A-6-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
240-82372-A-6-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
SDG: Plant McIntosh Landfill 4

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-318731/1-A
Matrix: Water
Analysis Batch: 322168

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318731

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02817	U	0.0398	0.0399	1.00	0.0674	pCi/L	07/24/17 08:07	08/15/17 06:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/24/17 08:07	08/15/17 06:46	1

Lab Sample ID: LCS 160-318731/2-A
Matrix: Water
Analysis Batch: 322168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318731

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	8.660		0.917	1.00	0.0609	pCi/L	76	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

Lab Sample ID: 240-82372-A-6-A MS
Matrix: Water
Analysis Batch: 322277

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 318731

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.235		11.4	11.95		1.25	1.00	0.0971	pCi/L	103	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	98.5		40 - 110								

Lab Sample ID: 240-82372-A-6-B MSD
Matrix: Water
Analysis Batch: 322277

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 318731

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.235		11.4	10.71		1.12	1.00	0.105	pCi/L	92	75 - 138	0.52	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	99.4		40 - 110										

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
SDG: Plant McIntosh Landfill 4

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-318739/1-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318739

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3082		0.176	0.179	1.00	0.264	pCi/L	07/24/17 08:48	08/07/17 12:31	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	07/24/17 08:48	08/07/17 12:31	1
Y Carrier	101		40 - 110	07/24/17 08:48	08/07/17 12:31	1

Lab Sample ID: LCS 160-318739/2-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318739

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.1	12.54		1.31	1.00	0.212	pCi/L	96	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
Y Carrier	104		40 - 110

Lab Sample ID: 240-82372-A-6-C MS
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 318739

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.272		13.1	12.30		1.31	1.00	0.293	pCi/L	92	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	98.5		40 - 110
Y Carrier	105		40 - 110

Lab Sample ID: 240-82372-A-6-D MSD
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 318739

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.272		13.1	13.17		1.39	1.00	0.293	pCi/L	99	45 - 150	0.33	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	99.4		40 - 110
Y Carrier	99.7		40 - 110

Chain of Custody Record

Carrier Tracking No(s): _____

Lab PM: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com

Sampler: W. Virgo 4777 A. Ellis 305
 Phone: _____

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 - Landfill #4
 Site: CCR

Client Information
 Lauren Petty

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=other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
GWC-23	7/13/17	1505	G	W	X	X				3	
DUP-1	7/13/17	—	G	W	X	X				3	
FB-1	7/13/17	1513	G	W	X	X				3	
FERB-1	7/13/17	1520	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) _____

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *Anthony Ellis* Date: 07-13-2017 1730 Company: TA

Relinquished by: *Jim DA* Date: 7/20/17 0849 Company: TA

Relinquished by: _____ Date: _____ Company: _____

Custody Seals Intact: Yes No

Custody Seal No.: 39C IR7 NH 1.06 IR7NH 1211.5C



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140651-2
SDG Number: Plant McIntosh Landfill 4

Login Number: 140651

List Number: 1

Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.5°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	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-140651-2
SDG: Plant McIntosh Landfill 4

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: 400-140651-2
SDG: Plant McIntosh Landfill 4

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: 400-147386-1

TestAmerica Sample Delivery Group: Plant McIntosh Landfill 4

Client Project/Site: CCR - Plant McIntosh

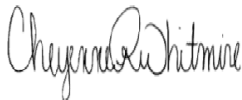
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

12/26/2017 4:53:26 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: 400-147386-1
SDG: Plant McIntosh Landfill 4

Job ID: 400-147386-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-147386-1

General Chemistry

Method(s) SM 2540C: The following sample was analyzed outside of analytical holding time due to analyst error: FB-1-20171213-01 (400-147386-8).

- 1
- 2
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- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-9-20171212-01

Lab Sample ID: 400-147386-1

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

Client Sample ID: GWC-10-20171212-01

Lab Sample ID: 400-147386-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.086		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	23		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-11-20171213-01

Lab Sample ID: 400-147386-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.48		0.20	0.082	mg/L	1		300.0	Total/NA
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-18-20171213-01

Lab Sample ID: 400-147386-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.61		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.0		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	12		0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: GWC-19-20171212-01

Lab Sample ID: 400-147386-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	9.1		0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-1-20171213-01

Lab Sample ID: 400-147386-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	90		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-2-20171213-01

Lab Sample ID: 400-147386-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.64		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.8		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	12		0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: FB-1-20171213-01

Lab Sample ID: 400-147386-8

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: FERB-1-20171213-01

Lab Sample ID: 400-147386-9

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

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: 400-147386-1
SDG: Plant McIntosh Landfill 4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-147386-1	GWC-9-20171212-01	Water	12/12/17 16:16	12/14/17 07:59
400-147386-2	GWC-10-20171212-01	Water	12/12/17 14:03	12/14/17 07:59
400-147386-3	GWC-11-20171213-01	Water	12/13/17 11:22	12/14/17 07:59
400-147386-4	GWC-18-20171213-01	Water	12/13/17 13:45	12/14/17 07:59
400-147386-5	GWC-19-20171212-01	Water	12/12/17 14:05	12/14/17 07:59
400-147386-6	DUP-1-20171213-01	Water	12/13/17 00:00	12/14/17 07:59
400-147386-7	DUP-2-20171213-01	Water	12/13/17 00:00	12/14/17 07:59
400-147386-8	FB-1-20171213-01	Water	12/13/17 14:55	12/14/17 07:59
400-147386-9	FERB-1-20171213-01	Water	12/13/17 15:00	12/14/17 07:59



Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-9-20171212-01

Lab Sample ID: 400-147386-1

Date Collected: 12/12/17 16:16

Matrix: Water

Date Received: 12/14/17 07:59

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			12/18/17 19:00	1

Client Sample ID: GWC-10-20171212-01

Lab Sample ID: 400-147386-2

Date Collected: 12/12/17 14:03

Matrix: Water

Date Received: 12/14/17 07:59

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.086		0.050	0.021	mg/L		12/15/17 09:47	12/15/17 22:51	5
Calcium	23		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 22:51	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			12/18/17 12:15	1

Client Sample ID: GWC-11-20171213-01

Lab Sample ID: 400-147386-3

Date Collected: 12/13/17 11:22

Matrix: Water

Date Received: 12/14/17 07:59

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.48		0.20	0.082	mg/L			12/18/17 19:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	11		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 22:55	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	68		5.0	3.4	mg/L			12/19/17 14:15	1

Client Sample ID: GWC-18-20171213-01

Lab Sample ID: 400-147386-4

Date Collected: 12/13/17 13:45

Matrix: Water

Date Received: 12/14/17 07:59

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.61		0.20	0.082	mg/L			12/18/17 20:08	1
Sulfate	4.0		1.0	0.70	mg/L			12/18/17 20:08	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	12		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 23:00	5

Client Sample ID: GWC-19-20171212-01

Lab Sample ID: 400-147386-5

Date Collected: 12/12/17 14:05

Matrix: Water

Date Received: 12/14/17 07:59

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	9.1		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 23:27	5

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: DUP-1-20171213-01

Lab Sample ID: 400-147386-6

Date Collected: 12/13/17 00:00

Matrix: Water

Date Received: 12/14/17 07:59

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		12/15/17 09:47	12/15/17 23:31	5
Calcium	11		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 23:31	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	90		5.0	3.4	mg/L			12/18/17 12:15	1

Client Sample ID: DUP-2-20171213-01

Lab Sample ID: 400-147386-7

Date Collected: 12/13/17 00:00

Matrix: Water

Date Received: 12/14/17 07:59

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.64		0.20	0.082	mg/L			12/19/17 05:39	1
Sulfate	3.8		1.0	0.70	mg/L			12/19/17 05:39	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	12		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 23:36	5

Client Sample ID: FB-1-20171213-01

Lab Sample ID: 400-147386-8

Date Collected: 12/13/17 14:55

Matrix: Water

Date Received: 12/14/17 07:59

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			12/18/17 21:40	1
Fluoride	<0.082		0.20	0.082	mg/L			12/18/17 21:40	1
Sulfate	<0.70		1.0	0.70	mg/L			12/18/17 21:40	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		12/15/17 09:47	12/15/17 23:40	5
Calcium	<0.13		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 23:40	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4	H	5.0	3.4	mg/L			12/22/17 15:53	1

Client Sample ID: FERB-1-20171213-01

Lab Sample ID: 400-147386-9

Date Collected: 12/13/17 15:00

Matrix: Water

Date Received: 12/14/17 07:59

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			12/18/17 22:02	1
Fluoride	<0.082		0.20	0.082	mg/L			12/18/17 22:02	1
Sulfate	<0.70		1.0	0.70	mg/L			12/18/17 22:02	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: FERB-1-20171213-01

Lab Sample ID: 400-147386-9

Date Collected: 12/13/17 15:00

Matrix: Water

Date Received: 12/14/17 07:59

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		12/15/17 09:47	12/15/17 23:45	5
Calcium	<0.13		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 23:45	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			12/20/17 18:42	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

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: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: GWC-9-20171212-01

Lab Sample ID: 400-147386-1

Date Collected: 12/12/17 16:16

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	380198	12/18/17 19:00	JAW	TAL PEN

Client Sample ID: GWC-10-20171212-01

Lab Sample ID: 400-147386-2

Date Collected: 12/12/17 14:03

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 22:51	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	380123	12/18/17 12:15	TET	TAL PEN

Client Sample ID: GWC-11-20171213-01

Lab Sample ID: 400-147386-3

Date Collected: 12/13/17 11:22

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	380198	12/18/17 19:46	JAW	TAL PEN
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 22:55	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	380328	12/19/17 14:15	TET	TAL PEN

Client Sample ID: GWC-18-20171213-01

Lab Sample ID: 400-147386-4

Date Collected: 12/13/17 13:45

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	380198	12/18/17 20:08	JAW	TAL PEN
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 23:00	DRE	TAL PEN

Client Sample ID: GWC-19-20171212-01

Lab Sample ID: 400-147386-5

Date Collected: 12/12/17 14:05

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 23:27	DRE	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Client Sample ID: DUP-1-20171213-01

Lab Sample ID: 400-147386-6

Date Collected: 12/13/17 00:00

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 23:31	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	380123	12/18/17 12:15	TET	TAL PEN

Client Sample ID: DUP-2-20171213-01

Lab Sample ID: 400-147386-7

Date Collected: 12/13/17 00:00

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	380225	12/19/17 05:39	JAW	TAL PEN
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 23:36	DRE	TAL PEN

Client Sample ID: FB-1-20171213-01

Lab Sample ID: 400-147386-8

Date Collected: 12/13/17 14:55

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	380198	12/18/17 21:40	JAW	TAL PEN
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 23:40	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	380816	12/22/17 15:53	TET	TAL PEN

Client Sample ID: FERB-1-20171213-01

Lab Sample ID: 400-147386-9

Date Collected: 12/13/17 15:00

Matrix: Water

Date Received: 12/14/17 07:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	380198	12/18/17 22:02	JAW	TAL PEN
Total Recoverable	Prep	3005A			379836	12/15/17 09:47	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	380256	12/15/17 23:45	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	380470	12/20/17 18:42	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: 400-147386-1
SDG: Plant McIntosh Landfill 4

HPLC/IC

Analysis Batch: 380198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-1	GWC-9-20171212-01	Total/NA	Water	300.0	
400-147386-3	GWC-11-20171213-01	Total/NA	Water	300.0	
400-147386-4	GWC-18-20171213-01	Total/NA	Water	300.0	
400-147386-8	FB-1-20171213-01	Total/NA	Water	300.0	
400-147386-9	FERB-1-20171213-01	Total/NA	Water	300.0	
MB 400-380198/4	Method Blank	Total/NA	Water	300.0	
LCS 400-380198/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-380198/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-147228-H-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-147228-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 380225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-7	DUP-2-20171213-01	Total/NA	Water	300.0	
MB 400-380225/36	Method Blank	Total/NA	Water	300.0	
LCS 400-380225/37	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-380225/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-147427-H-5 MS	Matrix Spike	Total/NA	Water	300.0	
400-147427-H-5 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 379836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-2	GWC-10-20171212-01	Total Recoverable	Water	3005A	
400-147386-3	GWC-11-20171213-01	Total Recoverable	Water	3005A	
400-147386-4	GWC-18-20171213-01	Total Recoverable	Water	3005A	
400-147386-5	GWC-19-20171212-01	Total Recoverable	Water	3005A	
400-147386-6	DUP-1-20171213-01	Total Recoverable	Water	3005A	
400-147386-7	DUP-2-20171213-01	Total Recoverable	Water	3005A	
400-147386-8	FB-1-20171213-01	Total Recoverable	Water	3005A	
400-147386-9	FERB-1-20171213-01	Total Recoverable	Water	3005A	
MB 400-379836/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-379836/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-147364-G-22-B MS ^5	Matrix Spike	Dissolved	Water	3005A	
400-147364-G-22-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	3005A	

Analysis Batch: 380256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-2	GWC-10-20171212-01	Total Recoverable	Water	6020	379836
400-147386-3	GWC-11-20171213-01	Total Recoverable	Water	6020	379836
400-147386-4	GWC-18-20171213-01	Total Recoverable	Water	6020	379836
400-147386-5	GWC-19-20171212-01	Total Recoverable	Water	6020	379836
400-147386-6	DUP-1-20171213-01	Total Recoverable	Water	6020	379836
400-147386-7	DUP-2-20171213-01	Total Recoverable	Water	6020	379836
400-147386-8	FB-1-20171213-01	Total Recoverable	Water	6020	379836
400-147386-9	FERB-1-20171213-01	Total Recoverable	Water	6020	379836
MB 400-379836/1-A ^5	Method Blank	Total Recoverable	Water	6020	379836
LCS 400-379836/2-A	Lab Control Sample	Total Recoverable	Water	6020	379836
400-147364-G-22-B MS ^5	Matrix Spike	Dissolved	Water	6020	379836

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Metals (Continued)

Analysis Batch: 380256 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147364-G-22-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	6020	379836

General Chemistry

Analysis Batch: 380123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-2	GWC-10-20171212-01	Total/NA	Water	SM 2540C	
400-147386-6	DUP-1-20171213-01	Total/NA	Water	SM 2540C	
MB 400-380123/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-380123/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-147199-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 380328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-3	GWC-11-20171213-01	Total/NA	Water	SM 2540C	
MB 400-380328/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-380328/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-147386-3 DU	GWC-11-20171213-01	Total/NA	Water	SM 2540C	

Analysis Batch: 380470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-9	FERB-1-20171213-01	Total/NA	Water	SM 2540C	
MB 400-380470/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-380470/2	Lab Control Sample	Total/NA	Water	SM 2540C	
680-146765-A-19 MS	Matrix Spike	Total/NA	Water	SM 2540C	
400-147320-E-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 380816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-147386-8	FB-1-20171213-01	Total/NA	Water	SM 2540C	
MB 400-380816/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-380816/2	Lab Control Sample	Total/NA	Water	SM 2540C	
680-146938-E-8 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-380198/4
Matrix: Water
Analysis Batch: 380198

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			12/18/17 12:31	1
Fluoride	<0.082		0.20	0.082	mg/L			12/18/17 12:31	1
Sulfate	<0.70		1.0	0.70	mg/L			12/18/17 12:31	1

Lab Sample ID: LCS 400-380198/5
Matrix: Water
Analysis Batch: 380198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.65		mg/L		96	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-380198/6
Matrix: Water
Analysis Batch: 380198

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	2	15
Fluoride	10.0	10.0		mg/L		100	90 - 110	2	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	0	15

Lab Sample ID: 400-147228-H-1 MS
Matrix: Water
Analysis Batch: 380198

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	860		1000	1780		mg/L		92	80 - 120
Fluoride	<8.2		1000	1020		mg/L		102	80 - 120
Sulfate	2700		1000	3660		mg/L		96	80 - 120

Lab Sample ID: 400-147228-H-1 MSD
Matrix: Water
Analysis Batch: 380198

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	860		1000	1780		mg/L		92	80 - 120	0	20
Fluoride	<8.2		1000	1010		mg/L		101	80 - 120	2	20
Sulfate	2700		1000	3680		mg/L		98	80 - 120	1	20

Lab Sample ID: MB 400-380225/36
Matrix: Water
Analysis Batch: 380225

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.082		0.20	0.082	mg/L			12/19/17 00:42	1
Sulfate	<0.70		1.0	0.70	mg/L			12/19/17 00:42	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-380225/37
Matrix: Water
Analysis Batch: 380225

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-380225/38
Matrix: Water
Analysis Batch: 380225

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
Fluoride	10.0	10.1		mg/L		101	90 - 110	0	15
Sulfate	10.0	10.3		mg/L		103	90 - 110	0	15

Lab Sample ID: 400-147427-H-5 MS
Matrix: Water
Analysis Batch: 380225

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.91	J	100	102		mg/L		101	80 - 120
Sulfate	81		100	188		mg/L		106	80 - 120

Lab Sample ID: 400-147427-H-5 MSD
Matrix: Water
Analysis Batch: 380225

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.91	J	100	102		mg/L		101	80 - 120	0	20
Sulfate	81		100	188		mg/L		107	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-379836/1-A ^5
Matrix: Water
Analysis Batch: 380256

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 379836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		12/15/17 09:47	12/15/17 21:43	5
Calcium	<0.13		0.25	0.13	mg/L		12/15/17 09:47	12/15/17 21:43	5

Lab Sample ID: LCS 400-379836/2-A
Matrix: Water
Analysis Batch: 380256

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 379836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.103		mg/L		103	80 - 120
Calcium	5.00	5.15		mg/L		103	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-147364-G-22-B MS ^5

Matrix: Water
Analysis Batch: 380256

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 379836

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	<0.021		0.100	0.115		mg/L		115	75 - 125
Calcium	150	E	5.00	154	E 4	mg/L		136	75 - 125

Lab Sample ID: 400-147364-G-22-C MSD ^5

Matrix: Water
Analysis Batch: 380256

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 379836

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	<0.021		0.100	0.112		mg/L		112	75 - 125	2	20
Calcium	150	E	5.00	157	E 4	mg/L		205	75 - 125	2	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-380123/1

Matrix: Water
Analysis Batch: 380123

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			12/18/17 12:15	1

Lab Sample ID: LCS 400-380123/2

Matrix: Water
Analysis Batch: 380123

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	274		mg/L		94	78 - 122

Lab Sample ID: 400-147199-A-1 DU

Matrix: Water
Analysis Batch: 380123

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	210		214		mg/L		0	5

Lab Sample ID: MB 400-380328/1

Matrix: Water
Analysis Batch: 380328

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			12/19/17 14:15	1

Lab Sample ID: LCS 400-380328/2

Matrix: Water
Analysis Batch: 380328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
SDG: Plant McIntosh Landfill 4

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 400-147386-3 DU
Matrix: Water
Analysis Batch: 380328

Client Sample ID: GWC-11-20171213-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	68		68.0		mg/L		0	5

Lab Sample ID: MB 400-380470/1
Matrix: Water
Analysis Batch: 380470

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			12/20/17 18:42	1

Lab Sample ID: LCS 400-380470/2
Matrix: Water
Analysis Batch: 380470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	276		mg/L		94	78 - 122

Lab Sample ID: 400-147320-E-5 DU
Matrix: Water
Analysis Batch: 380470

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	42		42.0		mg/L		0	5

Lab Sample ID: MB 400-380816/1
Matrix: Water
Analysis Batch: 380816

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			12/22/17 15:53	1

Lab Sample ID: LCS 400-380816/2
Matrix: Water
Analysis Batch: 380816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	250		mg/L		85	78 - 122

Lab Sample ID: 680-146938-E-8 DU
Matrix: Water
Analysis Batch: 380816

Client Sample ID: Duplicate
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

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-147386-1
SDG Number: Plant McIntosh Landfill 4

Login Number: 147386

List Number: 1

Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-147386-1
 SDG: Plant McIntosh Landfill 4

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
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	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Product Name: Low-Flow System

Date: 2017-12-12 16:26:36

Project Information:

Operator Name H. Beough
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name GPC - McIntosh
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 38 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 28.49 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3846101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.32 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		+/- 10%	+/- 10
Last 5	15:45:02	300.04	22.01	5.63	52.78	8.35	28.58	6.65	1.93
Last 5	15:50:02	600.04	21.99	5.27	53.31	5.96	28.58	6.86	-0.41
Last 5	16:00:02	1200.04	21.90	5.20	53.25	2.83	28.59	6.93	-4.28
Last 5	16:05:02	1500.04	21.83	5.17	53.12	2.60	28.59	6.93	-3.73
Last 5									
Variance 0			-0.01	-0.36	0.53			0.21	-2.34
Variance 1			-0.10	-0.07	-0.07			0.06	-3.87
Variance 2			-0.07	-0.03	-0.13			0.01	0.55

Notes

GWC-9-20171212-01 sample time: 1616. Purge rate: 200 mL/min. Purge time: 1540 to 1610

Grab Samples

GWC-9-20171212-01
Sample time: 1616

Product Name: Low-Flow System

Date: 2017-12-12 14:09:55

Project Information:

Operator Name H. Beough
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name GPC - McIntosh
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 38 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 33.5 ft
Screen Length 10 ft
Depth to Water 24.21 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3846101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.36 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	13:37:00	3000.05	21.30	7.31	236.60	7.32	24.24	6.81	-2.63
Last 5	13:42:00	3300.05	21.15	7.31	234.00	5.70	24.23	6.80	-2.76
Last 5	13:47:00	3600.05	21.32	7.30	232.57	4.63	24.24	6.77	-2.64
Last 5	13:52:01	3901.05	21.42	7.29	231.78	4.36	24.24	6.83	-2.80
Last 5	13:57:01	4201.03	21.33	7.28	229.69	3.48	24.24	6.81	-3.27
Variance 0			0.18	-0.01	-1.44			-0.03	0.12
Variance 1			0.10	-0.00	-0.79			0.06	-0.16
Variance 2			-0.09	-0.02	-2.09			-0.02	-0.47

Notes

GWC-10-20171212-01 sample time: 1403. Purge rate: 200 mL/min. Purge time: 1247 to 1357

Grab Samples

GWC-10-20171212-01
Sample time: 1403

Product Name: Low-Flow System

Date: 2017-12-13 11:26:31

Project Information:

Operator Name H. Beough
Company Name ERM
Project Name GPC - Plant McIntosh - LF4
Site Name GPC - McIntosh
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 43 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.5 ft
Screen Length 10 ft
Depth to Water 33.06 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4069272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.72 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:54:59	600.04	20.02	6.94	122.10	11.07	33.12	8.01	51.33
Last 5	10:59:59	900.04	20.17	6.89	120.63	6.13	33.12	7.86	45.43
Last 5	11:04:59	1200.04	20.22	6.86	119.53	4.70	33.12	7.92	43.16
Last 5	11:09:59	1500.04	20.31	6.84	118.78	3.77	33.12	7.94	40.99
Last 5	11:14:59	1800.03	20.19	6.84	117.80	3.27	33.12	7.99	39.64
Variance 0			0.05	-0.02	-1.10			0.06	-2.27
Variance 1			0.08	-0.02	-0.75			0.02	-2.17
Variance 2			-0.12	-0.01	-0.99			0.05	-1.35

Notes

GWC-11-20171213-01 sample time: 1122. Purge rate: 200 mL/min. Purge time: 1045 to 1115. DUP-1 taken

Grab Samples

GWC-20171213-01
Sample time: 1122
DUP-1-20171213-01
DUP-1

Product Name: Low-Flow System

Date: 2017-12-13 13:58:24

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.20 ft
Screen Length 10 ft
Depth to Water 35.39 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.415854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 15 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	+/- 100
Last 5	13:20:00	2399.62	19.06	6.36	109.63	7.05	35.78	5.16	75.74
Last 5	13:25:02	2701.61	19.14	6.37	109.62	6.39	35.79	5.03	75.97
Last 5	13:30:10	3009.61	19.28	6.38	110.93	4.95	35.79	4.90	76.31
Last 5	13:35:10	3309.62	19.28	6.37	109.93	4.61	35.80	4.80	77.15
Last 5	13:40:10	3609.61	19.28	6.37	109.76	3.82	35.80	4.73	77.73
Variance 0			0.14	0.00	1.30			-0.13	0.34
Variance 1			0.00	-0.00	-1.00			-0.09	0.84
Variance 2			-0.00	-0.00	-0.16			-0.07	0.58

Notes

1240 start purge at 250mL/min; 1300 1st well volume; 1315 2nd well volume; 1335 3rd well volume; 1340 all parameters stable. 1345 sampled at 250mL/min.

Grab Samples

GWC-18-20171213-01
Sampled at 1345
DUP-2-20171213-01
Sampled at 1345

Product Name: Low-Flow System

Date: 2017-12-12 14:12:04

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 31 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.42 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.415854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 1500 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	+/- 100
Last 5	13:40:12	2400.02	19.95	5.54	91.35	0.75	29.66	3.43	72.51
Last 5	13:45:12	2699.62	20.20	5.54	91.11	0.77	29.66	3.37	72.83
Last 5	13:50:12	2999.61	20.13	5.54	90.99	0.76	29.66	3.37	73.78
Last 5	13:55:12	3299.61	20.21	5.55	91.04	0.68	29.66	3.36	73.94
Last 5	14:00:12	3599.62	20.22	5.54	90.77	0.66	29.66	3.35	75.12
Variance 0			-0.07	-0.01	-0.12			-0.00	0.95
Variance 1			0.09	0.01	0.05			-0.01	0.15
Variance 2			0.00	-0.01	-0.26			-0.01	1.18

Notes

1300 began purge at 250mL/min; 1320 1st well volume; 1340 2nd well volume; 1400 3rd well volume, all parameters stable. 1405 sample at 250mL/

Grab Samples

GWC-19-20171212-01
Sampled at 1405

Product Name: Low-Flow System

Date: 2016-04-19 17:05:26

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 23.50 ft

Pump placement from TOC 23.50 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.50 ft
Screen Length 10 ft
Depth to Water 16.05 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4448904 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	16:19:14	300.05	22.09	5.07	43.15	4.77	16.20	5.70	188.35
Last 5	16:24:14	600.02	21.42	5.04	41.98	2.76	16.20	5.57	175.54
Last 5	16:29:14	900.02	21.33	5.02	41.46	2.42	16.22	5.51	170.21
Last 5	16:34:14	1200.02	21.22	5.01	40.90	1.61	16.22	5.44	168.53
Last 5	16:39:14	1500.02	21.13	4.99	40.04	1.87	16.22	5.40	168.03
Variance 0			-0.09	-0.01	-0.52			-0.05	-5.33
Variance 1			-0.11	-0.02	-0.56			-0.07	-1.67
Variance 2			-0.08	-0.02	-0.86			-0.04	-0.50

Notes

16:15 - start pump. 16:50 - collect sample

Grab Samples

GWA-2
2-500mL one preserved and one unpreserved. 1-4L preseeded

Product Name: Low-Flow System

Date: 2016-04-20 14:12:41

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Proactive Alexis V2.0 peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 23.50 ft

Pump placement from TOC 23.50 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.50 ft
Screen Length 10 ft
Depth to Water 14.60 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.4448904 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	13:46:14	600.02	20.94	5.47	74.55	3.50	14.78	3.56	118.84
Last 5	13:51:14	900.02	21.24	5.46	73.56	2.54	14.78	3.57	114.01
Last 5	13:56:14	1200.00	21.15	5.44	72.16	2.83	14.78	4.03	112.31
Last 5	14:01:14	1500.00	20.88	5.42	70.87	3.11	14.78	3.93	111.30
Last 5	14:06:14	1800.00	20.67	5.43	71.26	2.31	14.78	3.89	110.04
Variance 0			-0.09	-0.02	-1.40			0.46	-1.70
Variance 1			-0.27	-0.02	-1.29			-0.10	-1.02
Variance 2			-0.21	0.00	0.39			-0.04	-1.26

Notes

13:35 - start pump at GWC-1

Grab Samples

GWC-1

14:20 - sample collected at GWC-1

Product Name: Low-Flow System

Date: 2016-04-20 10:47:56

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 444108
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 43 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-4
Well diameter 2 in
Well Total Depth 43 ft
Screen Length 10 ft
Depth to Water 25.93 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5319272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 11.5 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	10:24:40	2400.00	20.33	4.92	45.30	8.22	25.26	3.61	130.32
Last 5	10:29:40	2699.99	20.39	4.91	44.48	7.29	25.26	3.63	130.50
Last 5	10:34:40	3000.00	20.52	4.92	44.31	7.09	25.26	3.61	129.47
Last 5	10:39:40	3299.99	20.49	4.90	44.41	5.90	25.26	3.51	128.80
Last 5	10:44:40	3599.99	20.57	4.90	43.55	4.86	25.26	3.61	128.86
Variance 0			0.13	0.00	-0.17			-0.02	-1.03
Variance 1			-0.03	-0.01	0.09			-0.10	-0.68
Variance 2			0.08	-0.01	-0.86			0.10	0.07

Notes

Sampling at 10:47 at 100ml/min. Turbidity took the longest to get in range

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-20 12:50:46

Project Information:

Operator Name Stephanie Gurr
Company Name ERM
Project Name Plant MacIntosh CCR
Site Name Plant MacIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotech bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 41.50 ft
Screen Length 10 ft
Depth to Water 24.36 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.4962198 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			+/- 10%	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	11:40:01	4800.82	22.31	5.86	45.59	6.45	24.60	6.24	125.36
Last 5	11:45:01	5100.80	23.42	5.86	45.26	6.49	24.60	5.91	123.82
Last 5	11:50:01	5400.80	24.71	5.86	45.36	4.91	24.60	5.73	124.03
Last 5	11:55:01	5700.80	22.98	5.84	43.41	4.83	24.60	6.17	125.40
Last 5	12:00:01	6000.81	22.48	5.85	43.57	4.41	24.00	6.25	123.58
Variance 0			1.30	-0.00	0.10			-0.18	0.21
Variance 1			-1.73	-0.02	-1.94			0.44	1.37
Variance 2			-0.51	0.01	0.15			0.08	-1.82

Notes

Due to high turbidity, lowered flow rate from 250 to 125 at 10:45

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-19 16:32:22

Project Information:

Operator Name Stephanie Gurr
Company Name ERM
Project Name Plant MacIntosh CCR
Site Name Plant MacIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotech bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.50 ft
Screen Length 10 ft
Depth to Water 27.91 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.487293 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			+/- 10%	+/- 0.2%	+/- 5%	+/- 5%		+/- 10%	+/- 1000%
Last 5	16:05:18	2403.00	21.48	4.93	61.72	1.81	27.95	8.06	215.96
Last 5	16:10:20	2705.00	21.51	4.93	61.15	2.95	27.95	8.04	216.52
Last 5	16:15:20	3005.00	23.16	4.93	61.95	2.64	27.95	8.02	213.45
Last 5	16:20:20	3305.00	25.80	4.93	62.89	2.82	27.95	7.88	215.71
Last 5	16:25:20	3605.00	28.08	4.94	63.83	2.80	27.95	7.75	218.03
Variance 0			1.65	0.00	0.80			-0.02	-3.08
Variance 1			2.65	0.00	0.94			-0.14	2.27
Variance 2			2.28	0.00	0.94			-0.13	2.31

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-19 17:31:42

Project Information:

Operator Name Stephanie Gurr
Company Name ERM
Project Name Plant MacIntosh CCR
Site Name Plant MacIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotech bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.50 ft
Screen Length 10 ft
Depth to Water 27.91 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.487293 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	16:39:33	299.97	33.46	4.96	67.46	2.85	27.95	7.32	231.68
Last 5	16:44:33	599.97	35.03	4.96	68.50	2.15	27.95	7.16	231.26
Last 5	16:49:33	899.97	36.46	4.98	67.61	2.10	27.95	7.01	234.15
Last 5	16:54:33	1199.97	37.59	4.99	67.42	2.21	27.95	6.84	238.96
Last 5	16:59:33	1499.97	38.12	4.98	69.64	2.18	27.95	6.71	229.75
Variance 0			1.43	0.02	-0.89			-0.15	2.88
Variance 1			1.13	0.00	-0.19			-0.18	4.81
Variance 2			0.53	-0.01	2.22			-0.12	-9.21

Notes

iPad rebooted. Had to continue info on new log
Continued from 1625. iPad issue. Had to create a new log.

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-21 11:53:35

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Proactive Alexis peristaltic pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 28.50 ft

Pump placement from TOC 28.50 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 33.50 ft
Screen Length 10 ft
Depth to Water 24.09 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4672076 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 22.875 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		+/- 10%	+/- 1000
Last 5	11:28:41	5400.99	20.27	6.22	147.85	0.53	24.15	4.90	92.71
Last 5	11:33:41	5700.99	20.26	6.22	148.96	0.52	24.15	6.06	91.37
Last 5	11:38:41	6000.97	20.21	6.22	150.26	0.52	24.15	5.38	90.46
Last 5	11:43:41	6300.96	20.24	6.21	146.18	0.39	24.15	5.68	90.97
Last 5	11:48:41	6600.97	20.27	6.21	143.74	0.38	24.15	5.97	90.92
Variance 0			-0.05	0.00	1.30			-0.68	-0.92
Variance 1			0.03	-0.01	-4.07			0.30	0.51
Variance 2			0.03	-0.01	-2.45			0.29	-0.05

Notes

Depth to water from btoc is at 24.09 feet (i.e., one foot below the depth of the top of the screen) so need to purge 3 well volumes

Grab Samples

GWC-10
12:00 - samples collected

Product Name: Low-Flow System

Date: 2016-04-20 15:40:13

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 46 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 42.30 ft
Screen Length 10 ft
Depth to Water 32.65 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.5453175 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.09 in
Total Volume Pumped 21.2 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	15:25:28	540.02	20.57	6.34	104.83	1.78	32.76	2.73	119.13
Last 5	15:28:28	720.02	20.57	6.34	102.37	1.35	32.76	2.82	119.39
Last 5	15:31:28	900.02	20.60	6.31	100.37	1.35	32.76	2.84	120.45
Last 5	15:34:28	1080.02	20.57	6.31	98.89	1.33	32.76	2.86	118.90
Last 5	15:37:28	1260.02	20.62	6.28	97.41	1.22	32.76	2.92	119.78
Variance 0			0.02	-0.03	-2.00			0.02	1.06
Variance 1			-0.02	0.00	-1.49			0.02	-1.55
Variance 2			0.04	-0.03	-1.48			0.06	0.88

Notes

Just realized drawdown says inches, but I'm entering feet because that's what the WLM's measure. Going to 3 well volumes. 3wv. Above screen, but less than 1'. Reduced purge rate to 250 mL/min for sampling. 15:40 sample time

Grab Samples

GWC-11
15:40

Product Name: Low-Flow System

Date: 2016-04-20 13:27:53

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 36 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.30 ft
Screen Length 10 ft
Depth to Water 26.45 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.15 in
Total Volume Pumped 5.125 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		+/- 10%	+/- 1000
Last 5	13:12:30	900.02	21.73	5.17	24.98	9.02	26.61	5.55	183.59
Last 5	13:15:30	1080.02	21.77	5.17	24.93	7.19	26.61	5.58	182.15
Last 5	13:18:30	1260.02	21.78	5.17	24.87	6.50	26.61	5.53	181.08
Last 5	13:21:30	1440.02	21.64	5.17	24.81	4.93	26.61	5.56	180.05
Last 5	13:24:30	1620.02	21.69	5.17	24.82	4.50	26.61	5.52	179.19
Variance 0			0.00	0.00	-0.06			-0.05	-1.07
Variance 1			-0.14	-0.00	-0.06			0.04	-1.03
Variance 2			0.05	-0.01	0.01			-0.05	-0.86

Notes

Sample time 13:24, no issues

Grab Samples

GWC-12
13:24

Product Name: Low-Flow System

Date: 2016-04-20 13:36:45

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 444108
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotechnical bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.78 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5274637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	13:15:08	1500.02	22.31	5.20	23.45	9.89	24.79	6.24	126.92
Last 5	13:20:08	1800.02	22.76	5.18	23.87	98.24	24.79	6.14	128.00
Last 5	13:25:08	2100.02	22.36	5.17	23.81	5.96	24.79	6.14	127.02
Last 5	13:30:08	2400.01	22.27	5.17	23.84	5.52	24.79	6.09	125.43
Last 5	13:35:09	2701.00	22.48	5.16	23.98	4.88	24.80	6.06	125.43
Variance 0			-0.40	-0.01	-0.05			-0.01	-0.98
Variance 1			-0.09	0.00	0.03			-0.04	-1.59
Variance 2			0.21	-0.02	0.14			-0.04	0.01

Notes

End purging at 13:45. Sampling at 100ml/min. Begin sampling at 13:38

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-20 15:16:29

Project Information:

Operator Name Stephanie Gurr
Company Name ERM
Project Name Plant MacIntosh CCR
Site Name Plant MacIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotech bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-14
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 25.32 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.540854 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	14:54:28	1500.02	24.38	5.39	40.61	1.40	26.10	4.90	140.93
Last 5	14:59:28	1800.02	23.61	5.40	42.60	1.22	26.12	4.87	135.93
Last 5	15:04:30	2102.02	22.98	5.39	40.46	1.49	26.11	4.90	133.59
Last 5	15:09:32	2403.96	23.22	5.41	42.38	1.36	26.12	4.89	131.71
Last 5	15:14:33	2704.96	23.05	5.41	40.81	1.45	26.12	4.86	130.22
Variance 0			-0.62	-0.01	-2.14			0.02	-2.34
Variance 1			0.23	0.01	1.92			-0.00	-1.88
Variance 2			-0.16	-0.00	-1.58			-0.03	-1.49

Notes

Waited for Drawdown to be stabilized

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-21 10:37:52

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 444108
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 5 ft

Well Information:

Well ID GWC-15
Well diameter 2 in
Well Total Depth 40.33 ft
Screen Length 10 ft
Depth to Water 21.29 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.4962198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.06 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	10:15:30	2412.02	22.18	5.19	23.63	3.85	21.35	5.56	119.04
Last 5	10:20:30	2712.01	22.77	5.18	23.61	4.71	21.35	5.73	120.86
Last 5	10:25:30	3012.01	22.58	5.18	23.63	3.35	21.35	5.48	118.38
Last 5	10:30:30	3312.01	23.15	5.18	23.80	3.45	21.35	5.64	119.23
Last 5	10:35:30	3612.01	23.58	5.18	23.75	2.33	21.35	6.00	123.53
Variance 0			-0.18	0.01	0.02			-0.25	-2.48
Variance 1			0.57	0.00	0.17			0.16	0.85
Variance 2			0.42	-0.00	-0.05			0.35	4.31

Notes

Sampling at 100ml/min. At 10:38. Turbidity took the longest to stabilize.

Grab Samples

GWC-15
Well in good condition

Product Name: Low-Flow System

Date: 2016-04-20 11:30:20

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 23.25 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.3962198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.06 in
Total Volume Pumped 13.875 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		+/- 10%	+/- 1000
Last 5	11:04:39	3599.99	21.15	5.17	23.12	1.30	23.67	6.40	144.32
Last 5	11:09:39	3899.99	21.37	5.16	21.84	0.84	23.69	5.81	143.90
Last 5	11:14:39	4200.00	21.30	5.16	23.08	0.91	23.68	6.46	143.15
Last 5	11:19:39	4500.00	21.41	5.17	22.95	0.71	23.68	6.72	142.82
Last 5	11:24:39	4800.00	21.36	5.16	23.15	0.58	23.68	6.92	142.95
Variance 0			-0.07	-0.00	1.24			0.65	-0.74
Variance 1			0.11	0.00	-0.13			0.26	-0.33
Variance 2			-0.05	-0.01	0.20			0.20	0.12

Notes

10:05 - start pump at GWC-16

Grab Samples

GWC-16

11:30 - sample collected at GWC - 16

Product Name: Low-Flow System

Date: 2016-04-20 10:56:40

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.1 ft
Screen Length 10 ft
Depth to Water 26.25 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 16.65 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		+/- 10%	+/- 1000
Last 5	10:40:08	2700.02	19.73	5.25	37.91	7.81	26.56	4.15	149.69
Last 5	10:43:09	2881.01	19.77	5.25	38.00	6.42	26.56	4.15	149.51
Last 5	10:46:09	3061.01	19.81	5.25	37.94	5.23	26.56	4.15	149.41
Last 5	10:49:09	3241.01	19.81	5.25	38.07	4.77	26.56	4.13	149.25
Last 5	10:52:09	3421.02	19.95	5.26	38.07	4.55	26.56	4.13	148.43
Variance 0			0.04	0.00	-0.06			-0.01	-0.10
Variance 1			0.01	0.00	0.12			-0.01	-0.16
Variance 2			0.13	0.00	-0.00			0.00	-0.82

Notes

Sample time 10:52, no issues other than elevated NTU from placing pump in well. Fill cycle =8 sec, discharge cycle =6.5 sec

Grab Samples

GWC-17
10:52

Product Name: Low-Flow System

Date: 2016-04-19 15:04:48

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 444108
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 50 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 45 ft
Screen Length 10 ft
Depth to Water 34.94 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.5631711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 35.3 in
Total Volume Pumped 24.9 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	14:40:56	4199.98	20.84	6.86	210.98	13.30	35.32	5.04	67.47
Last 5	14:45:55	4499.98	20.81	6.85	208.61	10.60	35.30	4.98	68.18
Last 5	14:51:00	4804.98	20.71	6.85	205.95	7.83	35.32	4.92	68.32
Last 5	14:56:00	5104.98	20.73	6.86	205.13	8.21	35.33	4.89	68.49
Last 5	15:01:00	5404.98	20.75	6.87	202.35	6.10	35.30	4.89	68.67
Variance 0			-0.11	0.00	-2.66			-0.06	0.15
Variance 1			0.03	0.01	-0.83			-0.03	0.16
Variance 2			0.02	0.01	-2.78			-0.01	0.18

Notes

Initially purging at .5L/min because water level in screen
Purged 3well volumes at 500ml then lowered purge to 100 ml. Sampling at 1505

Grab Samples

GWC-18
Sampling at 100ml/min

Product Name: Low-Flow System

Date: 2016-04-19 14:20:52

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 36 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 28.89 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.5006832 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.21 in
Total Volume Pumped 6750 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		+/- 10%	+/- 1000
Last 5	14:06:15	1080.02	19.94	6.00	102.44	7.61	29.11	2.79	157.33
Last 5	14:09:15	1260.02	19.91	5.97	97.07	5.25	29.10	3.00	154.97
Last 5	14:12:15	1440.02	19.99	5.97	99.12	4.98	29.10	3.06	151.53
Last 5	14:15:15	1620.02	19.99	5.99	100.65	4.69	29.09	3.01	148.04
Last 5	14:18:15	1800.02	19.91	5.99	100.74	4.58	29.09	3.04	145.40
Variance 0			0.08	0.00	2.06			0.06	-3.44
Variance 1			0.00	0.02	1.53			-0.05	-3.49
Variance 2			-0.08	0.00	0.09			0.03	-2.64

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-19 14:57:30

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 36 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-19 (cont'd)
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 28.96 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.5006832 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.2 in
Total Volume Pumped 15.075 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		+/- 10%	+/- 1000
Last 5	14:42:07	360.02	19.90	5.98	98.03	3.25	29.09	3.42	136.45
Last 5	14:45:07	540.02	19.90	5.97	98.07	2.75	29.09	3.45	134.41
Last 5	14:48:07	720.02	19.95	5.97	95.83	2.06	29.09	3.52	132.54
Last 5	14:51:07	900.02	19.85	5.99	99.81	2.50	29.09	3.43	129.98
Last 5	14:54:07	1080.02	19.78	5.98	98.35	2.32	29.09	3.43	128.94
Variance 0			0.05	-0.01	-2.23			0.07	-1.87
Variance 1			-0.09	0.02	3.97			-0.09	-2.56
Variance 2			-0.08	-0.01	-1.46			-0.00	-1.05

Notes

Part two of purge. Forgot I was supposed to sample to well after volume purge instead of stabilization
Data in between is missing as I thought it was sample time based on stability. Pump was running the whole time, so this total purge volume is

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-21 14:37:49

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotechnical Geopump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 26 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.1 ft
Screen Length 10 ft
Depth to Water 22.13 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 15 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		+/- 10%	+/- 1000
Last 5	14:21:01	1080.02	20.16	4.88	65.69	0.58	22.20	3.74	191.75
Last 5	14:24:01	1260.02	20.17	4.91	65.42	0.49	22.20	3.72	189.59
Last 5	14:27:01	1440.01	20.13	4.89	65.06	0.34	22.20	3.64	191.32
Last 5	14:30:01	1620.02	20.08	4.89	66.16	0.38	22.20	3.62	193.03
Last 5	14:33:01	1800.02	20.13	4.88	65.99	0.40	22.20	3.69	193.92
Variance 0			-0.04	-0.02	-0.36			-0.08	1.73
Variance 1			-0.05	-0.00	1.10			-0.01	1.71
Variance 2			0.04	-0.00	-0.16			0.07	0.89

Notes

iPad previously shut down for heat.

iPad shut down because of heat. Started readings again 18 mins after original. 3 wv purge, in screen. Sample time 14:35. No other issues. Great recharge.

Grab Samples
GWC-20
14:35



Product Name: Low-Flow System

Date: 2016-04-21 11:29:48

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Geopump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 26.3 ft
Screen Length 10 ft
Depth to Water 20.10 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 180 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			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	11:16:24	540.02	21.69	5.57	57.65	1.79	20.73	2.67	151.10
Last 5	11:19:24	720.02	21.73	5.55	56.34	1.25	20.75	2.77	146.46
Last 5	11:22:24	900.02	20.95	5.54	55.36	1.25	20.77	2.64	140.55
Last 5	11:25:24	1080.02	20.62	5.53	54.77	1.28	20.79	2.87	142.77
Last 5	11:28:24	1260.03	20.67	5.52	53.86	--	--	2.86	140.25
Variance 0			-0.78	-0.01	-0.99			-0.13	-5.91
Variance 1			-0.33	-0.00	-0.59			0.23	2.22
Variance 2			0.05	-0.01	-0.91			-0.01	-2.52

Notes

Hit the screen button. Will start new log.

Grab Samples

Product Name: Low-Flow System

Date: 2016-04-21 12:29:34

Project Information:

Operator Name Tracy Wardell
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 Hach 2100Q

Pump Information:

Pump Model/Type Geotech Geopump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-21 (cont'd)
Well diameter 2 in
Well Total Depth 26.3 ft
Screen Length 10 ft
Depth to Water 20.1 ft

Pumping Information:

Final Pumping Rate 125 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 8.64 in
Total Volume Pumped 11.75 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	12:13:36	2519.99	20.66	5.43	49.67	0.59	20.83	3.35	131.52
Last 5	12:16:36	2699.99	20.80	5.43	49.94	0.47	20.83	3.45	131.87
Last 5	12:19:36	2879.99	21.33	5.42	50.13	0.42	20.82	3.45	132.37
Last 5	12:22:36	3059.99	21.57	5.41	48.96	0.35	20.82	3.43	134.78
Last 5	12:25:36	3239.99	21.55	5.43	49.26	0.49	20.82	3.43	134.48
Variance 0			0.53	-0.01	0.19			0.00	0.50
Variance 1			0.24	-0.01	-1.17			-0.02	2.41
Variance 2			-0.02	0.02	0.31			-0.00	-0.29

Notes

Sample time 1227, 3wv in screened zone; rental pump didn't work, so delay in start time

Grab Samples

GWC-21
12:27

Product Name: Low-Flow System

Date: 2016-04-21 14:44:56

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 444108
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 32 ft

Pump placement from TOC

3 ft



Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 31.65 ft
Screen Length 10 ft
Depth to Water 27.62 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4828295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.53 in
Total Volume Pumped 16.5 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	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	14:20:45	3299.97	25.56	6.55	263.21	24.70	28.24	0.56	-30.60
Last 5	14:25:45	3599.97	25.62	6.55	265.59	5.58	28.30	0.55	-31.60
Last 5	14:30:45	3899.97	25.46	6.54	264.45	1.56	28.35	0.54	-32.27
Last 5	14:35:45	4199.91	25.80	6.54	265.16	1.51	28.40	0.53	-34.78
Last 5	14:40:46	4500.91	25.30	6.53	264.91	4.23	28.40	0.50	-34.85
Variance 0			-0.16	-0.01	-1.14			-0.02	-0.67
Variance 1			0.34	-0.00	0.71			-0.01	-2.51
Variance 2			-0.50	-0.01	-0.25			-0.03	-0.07

Notes

Originally started pumping at 1300 but accidentally hit finish at 1320. Starting over. Must purge 3 well volumes because in screen interval. Drop purge rate to 100ml/min after 3rd WV
Had to restart at 13:20 because accidentally hit finish. Water level was close to bottom so turbidity jumped around

Grab Samples

GWC-22

Everything took a long time to stabilize

Product Name: Low-Flow System

Date: 2016-06-14 10:47:02

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28 ft
Screen Length 10 ft
Depth to Water 14.84 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 1.56 in
Total Volume Pumped 5.6 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	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	10:30:43	720.02	22.92	5.03	41.49	6.82	14.97	5.80	202.27
Last 5	10:33:43	900.02	22.78	5.00	40.37	6.44	14.98	5.61	199.72
Last 5	10:36:43	1079.99	22.71	4.98	39.64	4.99	14.97	5.39	199.49
Last 5	10:39:43	1260.00	22.90	4.97	39.70	3.74	14.97	5.40	201.08
Last 5	10:42:43	1440.00	22.80	4.98	39.80	3.03	14.97	5.30	200.37
Variance 0			-0.06	-0.02	-0.74			-0.23	-0.23
Variance 1			0.18	-0.01	0.06			0.01	1.59
Variance 2			-0.10	0.01	0.10			-0.10	-0.71

Notes

No issues; pump start @1014

Grab Samples

GWA-2
Time 10:45

Product Name: Low-Flow System

Date: 2016-06-14 12:50:30

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 32.5 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 37.5 ft
Screen Length 10 ft
Depth to Water 18.17 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 60.96 in
Total Volume Pumped 6.45 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		+/- 10%	+/- 1000
Last 5	12:33:26	1440.02	23.83	4.89	39.35	0.35	23.15	3.53	178.17
Last 5	12:36:26	1620.02	23.93	4.90	39.18	0.26	23.18	3.46	178.58
Last 5	12:39:26	1800.02	23.88	4.90	39.29	0.31	23.20	3.47	179.45
Last 5	12:42:26	1980.02	23.94	4.89	39.27	0.38	23.23	3.40	179.84
Last 5	12:45:26	2160.07	23.88	4.89	39.22	0.35	23.25	3.39	180.12
Variance 0			-0.04	-0.00	0.12			0.01	0.87
Variance 1			0.06	-0.00	-0.02			-0.07	0.39
Variance 2			-0.06	-0.00	-0.05			-0.01	0.28

Notes

Turned purge rate down from 200 to 100 mL/ min to get WL to stabilize

Grab Samples

Product Name: Low-Flow System

Date: 2016-06-14 11:18:47

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 450141
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 37.9 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 23.94 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4558386 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	10:53:28	1800.02	26.15	4.88	39.77	1.08	24.20	2.86	265.97
Last 5	10:58:28	2100.02	26.39	4.89	37.85	0.76	24.20	2.93	263.26
Last 5	11:03:28	2399.95	26.51	4.89	37.35	0.84	24.20	3.11	261.87
Last 5	11:08:28	2699.95	26.42	4.90	36.77	0.76	24.20	3.16	261.18
Last 5	11:13:28	2999.95	26.51	4.90	36.36	0.68	24.19	3.28	260.54
Variance 0			0.12	-0.00	-0.49			0.18	-1.39
Variance 1			-0.09	0.01	-0.58			0.05	-0.68
Variance 2			0.09	0.00	-0.41			0.12	-0.64

Notes

Could only purge at about 150 mL/min

Grab Samples

GWA-4
3 bottles: CCR and state

Product Name: Low-Flow System

Date: 2016-06-14 13:34:48

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 450141
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 25.3 ft

Pump placement from TOC 25.3 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 40.3 ft
Screen Length 10 ft
Depth to Water 23.54 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3342141 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.13 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	13:10:16	600.02	27.91	5.52	36.58	4.81	23.90	5.62	205.38
Last 5	13:15:16	900.02	28.03	5.52	37.40	4.81	23.94	5.69	200.51
Last 5	13:20:16	1200.02	27.76	5.52	37.08	4.98	23.91	5.58	195.94
Last 5	13:25:16	1500.02	27.11	5.53	37.41	4.67	23.91	5.47	191.02
Last 5	13:30:16	1799.98	26.81	5.53	37.75	4.13	23.94	5.53	186.99
Variance 0			-0.28	0.01	-0.32			-0.11	-4.57
Variance 1			-0.65	0.01	0.33			-0.11	-4.92
Variance 2			-0.30	0.00	0.34			0.07	-4.03

Notes

Grab Samples

GWA-5
3 bottles: CCR and state



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: 0372382 Sampling Date: 6/14/2016
 Site: Plant McIntosh Location: LF4 Sampler's Name: MR, AS, SG, TW
 Well ID: GWA-13 Pump Type/Model: _____ Sample Collection Time: 1114
 Total Depth (ft)¹: 40.11 Tubing Material: _____ Sample Purge Rate (L/min)³: _____
 Depth to Water (ft): 24.46 Pump Intake Depth (ft): _____ Sample ID: GWA-13
 Well Diameter (in): _____ Start/Stop Purge Time: 1016 Laboratory Analyses: _____
 Well Volume (gal) = 0.041d²h: _____ Purge Rate (L/min)²: _____
 Well Volume (L) = gal * 3.785: _____ Total Purge Volume (L): _____
 d = well diameter (inches) h = length of water column (feet) Purge Method: Low-Flow Well Volume Other: _____ QA/QC Collected? _____
 Well Type: Flush Stick Up Sampling Method: Pump Discharge Other: _____ QA/QC I.D. _____
 Well Lock: Yes No
 Well Bolted: Yes No Bolts Needed: _____
 Well Cap Condition: Good Replace Other _____
 Well Tag Present: Yes No Water in Vault: Yes No

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H ₂ O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1021	28.14	18.9	5.48	5.49	271.5			1.0	24.5	
1026	24.38	19.5	7.07	5.42	280.8			2.0	24.51	
1031	24.03	20.5	6.45	5.38	284.9			3.0	24.51	
1036	24.02	21.2	7.06	5.36	291.4			4.0	24.52	
1041	24.15	21.0	6.90	5.37	294.2			5.0	24.51	
1046	24.41	21.3	7.14	5.38	288.8			6.0	24.51	Parameters stabilized
1051	24.15	21.3	7.13	5.36	292.1			7.0	24.51	
1056	24.29	21.9	6.02	5.35	303.8	411.00		8.0	24.51	
										Sampled at 11:14
Stabilizing Criteria^{4, 5}		+/- 5%	0.2 mg/L or 10% whichever is greater⁹⁾	+/- 0.1 unit		<5 NTUs	>100 mL < 500 mL	>3L	<0.33 ft	

(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. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
 (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)

Purge Log QA/QC'd By: _____
 Date: _____
 Purge Log QA/QC'd By: _____
 Date: _____

*Note: Revised from handwritten field log recorded on 6/14/2017.

Product Name: Low-Flow System

Date: 2016-06-15 10:13:07

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 450141
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 35 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40 ft
Screen Length 10 ft
Depth to Water 22.66 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.4278456 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 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	09:49:48	600.02	23.43	5.05	21.97	0.53	22.96	6.52	233.49
Last 5	09:54:48	900.03	23.52	5.03	22.19	0.43	22.97	6.27	231.20
Last 5	09:59:48	1200.02	23.56	5.03	22.13	0.48	22.97	6.59	226.93
Last 5	10:04:48	1500.02	23.63	5.03	22.15	0.43	22.97	6.58	225.07
Last 5	10:09:48	1800.07	23.52	5.04	22.18	0.33	22.97	6.48	219.23
Variance 0			0.04	0.00	-0.07			0.32	-4.27
Variance 1			0.07	0.01	0.03			-0.01	-1.85
Variance 2			-0.11	0.01	0.03			-0.10	-5.84

Notes

Grab Samples

GWA-16
3 bottles: CCR and state; collected at 1020

Product Name: Low-Flow System

Date: 2016-06-15 10:02:02

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 25 ft

Pump placement from TOC 22.6 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 27.6 ft
Screen Length 10 ft
Depth to Water 13.33 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 2.64 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			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	09:47:23	540.03	22.13	5.30	64.34	1.01	14.10	3.28	175.33
Last 5	09:50:23	720.02	22.27	5.28	63.37	0.97	14.10	3.37	174.44
Last 5	09:53:23	900.02	22.40	5.28	61.96	0.91	14.10	3.43	174.19
Last 5	09:56:23	1080.02	22.35	5.28	61.39	0.88	14.10	3.48	173.45
Last 5	09:59:23	1260.02	22.40	5.28	60.23	0.79	14.10	3.49	173.21
Variance 0			0.14	-0.00	-1.41			0.07	-0.24
Variance 1			-0.05	-0.01	-0.57			0.04	-0.74
Variance 2			0.05	0.00	-1.15			0.01	-0.24

Notes

Start pump @ 0931; no issues

Grab Samples

Product Name: Low-Flow System

Date: 2016-06-15 11:52:06

Project Information:

Operator Name Myles Rogers
Company Name ERM
Project Name Plant McIntosh CCR
Site Name McIntosh GW
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 .17 in
Tubing Length 40 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38 ft
Screen Length 10 ft
Depth to Water 27.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4785369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 21 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:24:47	1200.02	22.04	5.21	61.61	0.93	27.89	6.95	206.35
Last 5	11:29:47	1500.02	22.31	5.21	61.30	0.74	27.89	6.80	211.91
Last 5	11:34:47	1800.02	22.40	5.20	60.76	0.85	27.89	6.75	206.45
Last 5	11:39:47	2100.00	22.52	5.20	61.30	1.10	27.88	6.78	206.46
Last 5	11:49:47	2700.00	23.79	5.20	60.14	0.94	27.87	6.77	208.67
Variance 0			0.09	-0.01	-0.54			-0.06	-5.47
Variance 1			0.12	0.01	0.54			0.04	0.02
Variance 2			1.27	-0.00	-1.16			-0.02	2.20

Notes

Had to purge 3WV. First was 1118, second at 1130 and third at 1142. Sample at 1156

Grab Samples

GWC-9
Sampling at 1156

Product Name: Low-Flow System

Date: 2016-06-16 09:38:07

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 28.2 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 32.6 ft
Screen Length 10 ft
Depth to Water 23.80 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0 in
Total Volume Pumped 16.4 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		+/- 10%	+/- 1000
Last 5	09:23:21	903.02	20.95	6.32	184.42	0.36	23.80	3.90	130.01
Last 5	09:26:21	1083.02	20.95	6.32	180.67	0.30	23.80	3.82	128.95
Last 5	09:29:21	1263.02	20.91	6.29	178.33	0.29	23.80	3.78	128.30
Last 5	09:32:21	1443.02	20.93	6.29	180.00	0.29	23.80	3.78	127.68
Last 5	09:35:21	1623.02	20.93	6.27	175.05	0.29	23.80	3.78	127.57
Variance 0			-0.04	-0.03	-2.33			-0.04	-0.65
Variance 1			0.02	0.00	1.67			0.01	-0.62
Variance 2			0.00	-0.03	-4.95			-0.01	-0.12

Notes

Purged 3 well volumes; lowered pump rate to 250 mL/min prior to sampling; began purring at 0855

Grab Samples

GWC-10
Sample time 0940

Product Name: Low-Flow System

Date: 2016-06-15 14:03:35

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Geotech Bladder Pump
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 43 ft

Pump placement from TOC 38.7 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.7 ft
Screen Length 10 ft
Depth to Water 32.50 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.5319272 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 8.5 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		+/- 10%	+/- 1000
Last 5	13:48:06	360.02	22.49	6.57	126.98	5.72	32.57	2.65	94.66
Last 5	13:51:06	540.02	22.53	6.56	127.43	5.08	32.57	2.62	97.14
Last 5	13:54:06	720.02	22.47	6.57	126.80	4.38	32.57	2.60	97.54
Last 5	13:57:06	900.02	22.37	6.57	125.69	4.27	32.57	2.61	99.89
Last 5	14:00:06	1080.02	22.43	6.55	124.10	4.34	32.57	2.59	99.56
Variance 0			-0.07	0.01	-0.63			-0.02	0.40
Variance 1			-0.09	-0.00	-1.12			0.01	2.35
Variance 2			0.06	-0.02	-1.59			-0.02	-0.33

Notes

Started pump @ 1326
Started pump at 1326; initially set pump too low in well, so allowed extra purge for NTU drop. Brain melted. 43.7 became 47.3 in my head, so cut tubing too long.

Grab Samples

Product Name: Low-Flow System

Date: 2016-06-15 11:23:52

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 38 ft

Pump placement from TOC 36.3 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.3 ft
Screen Length 10 ft
Depth to Water 25.71 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2596101 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 2.76 in
Total Volume Pumped 3.45 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		+/- 10%	+/- 1000
Last 5	11:11:40	180.10	23.21	5.11	23.42	0.74	25.93	5.34	182.13
Last 5	11:14:40	360.02	23.12	5.10	23.54	0.78	25.94	5.40	180.04
Last 5	11:17:40	540.02	23.15	5.11	23.56	0.82	25.94	5.35	181.94
Last 5	11:20:40	720.02	23.17	5.12	23.49	0.66	25.94	5.32	183.49
Last 5									
Variance 0			-0.09	-0.01	0.13			0.06	-2.09
Variance 1			0.04	0.01	0.02			-0.05	1.90
Variance 2			0.02	0.01	-0.07			-0.02	1.55

Notes

Pump started at 1057; no issues; good recharge

Grab Samples

GWC-12
Sample time 1123

Product Name: Low-Flow System

Date: 2016-06-15 12:51:10

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 450141
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 36 ft

Pump placement from TOC 36 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 41 ft
Screen Length 10 ft
Depth to Water 25.82 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4374984 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	12:28:24	1200.02	27.30	5.17	33.09	1.08	26.11	3.72	200.93
Last 5	12:33:24	1500.02	27.02	5.16	33.27	1.45	26.11	3.81	197.86
Last 5	12:38:24	1800.02	27.21	5.17	33.15	1.78	26.11	3.59	195.70
Last 5	12:43:24	2100.02	27.34	5.17	33.65	1.88	26.11	3.54	193.80
Last 5	12:48:24	2400.02	27.93	5.12	33.80	1.99	26.11	3.56	194.23
Variance 0			0.19	0.01	-0.12			-0.22	-2.17
Variance 1			0.13	0.00	0.50			-0.05	-1.90
Variance 2			0.59	-0.05	0.15			0.02	0.43

Notes

Grab Samples

GWC-17
3 bottles: CCR and state; collected at 1300

Product Name: Low-Flow System

Date: 2016-06-16 15:03:43

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model

Pump Information:

Pump Model/Type
Tubing Type
Tubing Diameter in
Tubing Length ft
Pump placement from TOC ft

Well Information:

Well ID GWC-18
Well diameter in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 34.92 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.09 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			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	14:37:03	2100.02	36.59	6.87	238.51	7.73	--	2.12	133.20
Last 5	14:42:03	2400.02	38.03	6.85	238.30	5.52	--	2.10	131.24
Last 5	14:47:03	2699.96	38.39	6.85	237.46	4.72	--	2.09	131.16
Last 5	14:52:03	2999.96	38.57	6.84	235.41	4.04	--	2.10	132.31
Last 5	14:57:03	3299.96	39.04	6.84	236.00	3.86	--	2.09	131.07
Variance 0			0.36	0.01	-0.84			-0.01	-0.09
Variance 1			0.18	-0.01	-2.05			0.01	1.16
Variance 2			0.47	0.00	0.59			-0.01	-1.25

Notes

Grab Samples

GWC-18
3 bottles: CCR and state; collected 1515

Product Name: Low-Flow System

Date: 2016-06-16 13:45:49

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 33.2 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 37.7 ft
Screen Length 10 ft
Depth to Water 28.81 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 2.64 in
Total Volume Pumped 17.25 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		+/- 10%	+/- 1000
Last 5	13:24:51	2520.02	21.86	5.85	90.35	0.33	29.03	2.49	116.81
Last 5	13:27:51	2700.02	21.91	5.86	89.59	0.40	29.03	2.51	115.31
Last 5	13:30:51	2880.02	21.98	5.85	89.07	0.32	29.03	2.51	115.25
Last 5	13:33:51	3060.02	21.98	5.85	87.63	0.30	29.03	2.56	115.15
Last 5	13:36:51	3240.02	22.05	5.85	89.45	0.29	29.03	2.55	115.40
Variance 0			0.07	-0.01	-0.51			-0.00	-0.06
Variance 1			-0.01	0.00	-1.45			0.06	-0.11
Variance 2			0.07	-0.00	1.82			-0.02	0.25

Notes

This smartroll did not record the last reading @ 13:39, the data in here does cover 3 wv, was just doing one more so there were no questions (16.45L calc vs. 16.5L by purge rate); purged volume due to water level

Grab Samples

GWC-19
Sample time 1344

Product Name: Low-Flow System

Date: 2016-06-16 11:39:57

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Plant 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 Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 26.1 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.1 ft
Screen Length 10 ft
Depth to Water 22.11 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 17 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		+/- 10%	+/- 1000
Last 5	11:23:13	1080.02	20.68	4.87	59.89	0.40	22.23	3.30	162.30
Last 5	11:26:13	1260.02	20.71	4.85	60.26	0.34	22.23	3.30	165.06
Last 5	11:29:13	1440.02	20.61	4.84	60.23	0.30	22.23	3.36	169.19
Last 5	11:32:13	1620.02	20.62	4.85	59.38	0.23	22.23	3.43	170.05
Last 5	11:35:13	1800.02	20.63	4.85	60.00	0.29	22.23	3.40	172.41
Variance 0			-0.10	-0.01	-0.04			0.06	4.13
Variance 1			0.01	0.01	-0.85			0.07	0.86
Variance 2			0.01	0.00	0.62			-0.03	2.37

Notes

Purged 3 well volumes; reduced pump rate to 250mL for sampling

Grab Samples

GWC-20
Sample time 1140

Product Name: Low-Flow System

Date: 2016-06-16 10:38:55

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 450141
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 25 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 26.6 ft
Screen Length 10 ft
Depth to Water 20.05 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3313183 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	10:16:21	3600.02	26.42	5.26	45.53	1.02	20.65	4.37	161.90
Last 5	10:21:21	3899.97	26.70	5.24	45.83	0.85	20.65	4.46	161.98
Last 5	10:26:21	4199.97	26.70	5.24	45.07	0.73	20.65	4.43	161.92
Last 5	10:31:21	4499.97	26.93	5.26	45.75	0.76	20.66	4.44	160.66
Last 5	10:36:21	4799.97	27.25	5.23	44.88	0.73	20.66	4.44	161.80
Variance 0			0.00	0.01	-0.76			-0.03	-0.06
Variance 1			0.23	0.01	0.67			0.01	-1.27
Variance 2			0.32	-0.02	-0.86			0.00	1.14

Notes

Need to pump 3 well volumes as DTW is below top of screen
Purged 3 well volumes

Grab Samples

GWC-21
3 bottles: CCR and state; collected at 1045



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: _____ Sampling Date: 6/16/16
 Site: Plant McInerish Location: _____ Sampler's Name: MR Rogers
 Well ID: AWC22 Pump Type/Model: Alaris Per Sample Collection Time: 0952
 Total Depth (ft): 31.5 Tubing Material: LDPE Sample Purge Rate (L/min): 1
 Depth to Water (ft): 26.80 Pump Intake Depth (ft): 26 Laboratory Analyses: _____
 Well Diameter (in): 2 Start/Stop Purge Time: 1308 6/16/15 - 905 Sample ID: _____
 Well Volume (gal) = 0.041d²h: .77 Purge Rate (L/min): .2 Laboratory Analyses: _____
 Well Volume (L) = gal * 3.785: 3L Total Purge Volume (L): 25 QA/QC Collected? N
 d = well diameter (inches) h = length of water column (feet) Purge Method: Well Volume Other: _____ QA/QC I.D. _____
 Well Type: Flush Stick Up Sampling Method: Pump Discharge Other: _____
 Well Lock: Yes No
 Well Bolted: Yes No Bolts Needed: _____
 Well Cap Condition: Good Replace Other
 Well Tag Present: Yes No Water in Vault: Yes No

All sample containers requiring chemical preservation properly preserved prior to removal from well? Yes No

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	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.)
1314	23.77	266.8	6.7	6.80	9.4	1.23	500	3L	27.31	1st WV
1320	23.42	334	6.7	6.82	-22	1.20	500	6L	28.44	2nd WV
1326	23.40	338.7	6.72	6.73	-21.2	1.01	500	9L	29.16	3rd WV Dec PR to 2 L/min
1328	25.06	325.7	6.81	7.03	-73.8		200	10	29.16	Dec PR to 1 L/min
1333	27.71	326.10	6.61	7.09	-71.4		100	16.5	29.20	
1518	28.83	192.6	5.54	6.80	-26.6	274	100	21	31.35	
Continuing on 6/16/16										
0910										
0915	25.31	211.40	4.70	6.66	7.80	15.9	100	21.5	27.09	
0920	25.31	208.96	4.46	6.64	15.80	5.34	100	22.0	27.21	
0925	25.36	205.30	4.45	6.69	23.70	3.51	100	22.5	27.31	
0930	25.60	188.4	4.71	6.67	35.70	2.80	100	23.0	27.44	
0935	26.07	170.0	4.75	6.64	33.20	2.49	100	23.5	27.55	
0940	26.15	168.86	4.62	6.60	24.50	2.74	100	24.0	27.65	
0945	26.73	169.5	4.45	6.61	30.1	2.52	100	24.5	27.74	
0950	27.04	172.6	4.45	6.62	27.2	2.40	100	25.0	27.77	
Parameters stable @ 0950										
Sampling @ 0956										
Stabilizing Criteria ^a		+/- 5%	0.2 mg/L or 10% whichever is greater	+/- 0.2 unit		<5 NTUs	>100 mL <250 mL	>3L	<0.33 ft	

(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. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
 (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)

Purge Log QA/QC'd By: _____
 Date: _____
 Purge Log QA/QC'd By: _____
 Date: _____



GROUNDWATER SAMPLING LOG SHEET

Client: GPC
 Site: Plant McIntosh
 Well ID: GW-023
 Total Depth (ft): 33
 Depth to Water (ft): 27.6
 Well Diameter (in): 2
 Well Volume (gal) = 0.041d²h: 1.84
 Well Volume (L) = gal * 3.785: 3.2
 d = well diameter (inches) h = length of water column (feet)
 Well Type: Flush Stick Up
 Well Lock: Yes No
 Well Bolted: Yes No Bolts Needed: No
 Well Cap Condition: Replace Other
 Well Tag Present: No Water in Vault: Yes No

Project No.: _____
 Location: Kincon, Ga
 Pump Type/Model: Alaris P01
 Tubing Material: LDPE
 Pump Intake Depth (ft): 30
 Start/Stop Purge Time: 1145
 Purge Rate (L/min): 500 L → 100 mL
 Total Purge Volume (L): _____
 Purge Method: Low-Flow Well Volume Other:
 Sampling Method: Pump Discharge Other:

Sampling Date: 6/16/16
 Sampler's Name: M. Rogers
 Sample Collection Time: 1301
 Sample Purge Rate (L/min): 100 L/min
 Sample ID: _____
 Laboratory Analyses: _____
 QA/QC Collected? No Yes
 QA/QC I.D. _____

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	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.)
1157	23.50	175.1	5.27	6.87	182.5	12.3	500	3.2	29.1	1st wv
1157	23.14	157.8	6.37	6.78	163	13.0	300	6.4	29.43	2nd wv
1203	23.73	224.7	6.22	6.78	143	15.7	500	9.6	29.54	3rd wv
1205	26.60	217.9	4.64	6.80	-8.30	10.48	100	10.1	29.41	dec PR to 100 mL
1210	26.69	203.7	4.93	6.81	-8.30	5.21	4	10.6	29.40	
1215	26.64	204.00	4.80	6.82	-13.10	5.63		11.1	29.40	
1220	26.89	206.46	1.58	6.82	-14.10	3.78		11.6	29.40	
1225	26.29	203.40	1.62	6.82	-24.58	2.74		12.1	29.40	
1230	27.49	206.0	6.82	6.82	-27.00	2.60		12.6	29.39	
1235	27.80	208.70	2.09	6.80	-29.8	2.51		13.1	29.39	
1240	27.46	203.80	1.48	6.80	-26.40	2.30		13.6	29.39	
1245	27.99	197.4	1.50	6.77	-22.9	2.35		14.1	29.38	
1250	28.67	187.7	1.58	6.75	-13.24	1.5		14.6	29.38	
1255	28.89	198.90	1.68	6.74	-14.6	1.54		14.5	29.38	
Parameters				Stable						
Sample @ 1301										
Stabilizing Criteria ^{4,5}		+/- 5%	0.2 mg/L or 10% whichever is greater ⁶	+/- 0.2 unit	<5 NTUs	>100 mL <250 mL	>3L	<0.33 ft		

- Maximum purge rate of 250 mL/min
- Sample rate to be between 100 mL/min and 250 mL/min
- Collect sample from pump discharge without tubing contacting sample container 6.4 per volume
- Field parameter measurements to be recorded every 3 to 5 minutes.
- Stabilization criteria based on three most recent consecutive measurements.
- Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
- Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed
- Preserve all samples as appropriate immediately following collection
- DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

Purge Log QA/QC'd By: _____
 Date: _____
 Purge Log QA/QC'd By: _____
 Date: _____

Product Name: Low-Flow System

Date: 2016-08-09 10:07:19

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 32.5 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 16.82 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.2350612 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 7.2 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	09:48:16	180.14	22.37	4.71	36.61	0.25	16.94	5.07	183.02
Last 5	09:51:16	360.02	22.36	4.72	36.47	0.38	16.94	5.06	181.70
Last 5	09:54:16	540.02	22.21	4.70	36.54	0.53	16.94	5.15	181.00
Last 5	09:57:16	720.02	22.13	4.71	36.65	0.60	16.94	5.12	179.83
Last 5	10:00:16	900.02	22.08	4.72	36.64	0.44	16.94	5.14	178.72
Variance 0			-0.15	-0.01	0.06			0.08	-0.69
Variance 1			-0.07	0.01	0.11			-0.03	-1.17
Variance 2			-0.05	0.00	-0.01			0.02	-1.11

Notes

Started pump at 0928.
No issues.

Grab Samples

GWA-2
Sample time 1010
DUP-1
Sample time 1010

Product Name: Low-Flow System

Date: 2016-08-09 09:56:10

Project Information:

Operator Name Prime
Company Name Erm
Project Name Plant McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 37 ft

Pump placement from TOC 32.54 ft

Well Information:

Well ID gwa3
Well diameter 2 in
Well Total Depth 37.54 ft
Screen Length 10 ft
Depth to Water 19.32 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.265004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20.64 in
Total Volume Pumped 2.5 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	+/- 20
Last 5	09:29:56	900.02	25.57	4.97	39.09	2.71	20.22	4.77	101.60
Last 5	09:34:56	1200.01	24.42	4.93	39.96	1.83	20.72	4.72	95.11
Last 5	09:39:56	1500.00	24.83	4.93	40.21	2.00	20.95	4.64	92.39
Last 5	09:44:56	1800.01	25.24	4.93	40.23	1.50	21.00	4.39	91.86
Last 5	09:49:56	2100.00	25.55	4.92	40.23	1.60	21.04	4.36	92.40
Variance 0			0.41	0.00	0.25			-0.08	-2.72
Variance 1			0.41	-0.00	0.02			-0.25	-0.52
Variance 2			0.31	-0.01	-0.00			-0.03	0.54

Notes

Sample time 09:59

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-11 09:19:33

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWA-4R
Well diameter 2 in
Well Total Depth 38 ft
Screen Length 10 ft
Depth to Water 24.43 ft

Pumping Information:

Final Pumping Rate 220 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 5.76 in
Total Volume Pumped 11.44 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	09:04:49	2160.02	22.05	5.34	37.23	5.66	24.91	5.14	111.11
Last 5	09:07:49	2340.02	22.04	5.35	37.02	5.39	24.91	4.84	110.89
Last 5	09:10:49	2520.02	22.02	5.35	36.98	4.82	24.91	4.83	106.35
Last 5	09:13:49	2700.02	22.04	5.36	37.30	4.37	24.91	4.72	106.72
Last 5	09:16:49	2880.02	22.08	5.37	37.31	4.48	24.91	4.71	107.23
Variance 0			-0.03	0.00	-0.04			-0.01	-4.54
Variance 1			0.03	0.01	0.32			-0.11	0.37
Variance 2			0.04	0.01	0.00			-0.01	0.52

Notes

Started purging at 08:24
No issues. Good recharge

Grab Samples

GWA-4R
sample time 09:20

Product Name: Low-Flow System

Date: 2016-08-09 10:20:10

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 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Pegasus peristaltic
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 36.50 ft

Pump placement from TOC 36.50 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.50 ft
Screen Length 10 ft
Depth to Water 23.72 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2626391 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 4.75 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	+/- 20
Last 5	09:56:13	1500.02	24.02	5.43	34.09	0.39	23.92	6.02	193.91
Last 5	10:01:13	1800.03	23.89	5.43	34.69	0.25	23.92	6.11	191.80
Last 5	10:06:13	2100.02	24.07	5.43	33.79	0.25	23.94	6.06	191.58
Last 5	10:11:13	2400.02	24.19	5.43	34.23	0.32	23.94	6.09	190.53
Last 5	10:16:13	2700.02	24.53	5.44	35.50	0.34	23.94	6.03	190.28
Variance 0			0.18	-0.00	-0.89			-0.05	-0.21
Variance 1			0.12	0.00	0.43			0.04	-1.05
Variance 2			0.34	0.01	1.27			-0.07	-0.26

Notes

Grab Samples

GWA-5
3 bottles; sample collected at 1025

Product Name: Low-Flow System

Date: 2016-08-09 12:29:26

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 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Pegasus peristaltic
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 35.11 ft

Pump placement from TOC 35.11 ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.28 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2560646 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 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	+/- 20
Last 5	12:05:17	900.03	25.51	4.96	19.96	0.90	24.30	6.05	226.78
Last 5	12:10:17	1200.02	25.24	4.92	20.45	0.98	24.30	5.92	223.37
Last 5	12:15:17	1500.03	25.51	4.90	21.06	0.49	24.30	5.90	222.74
Last 5	12:20:17	1800.02	25.32	4.89	21.27	0.56	24.30	5.84	220.65
Last 5	12:25:17	2100.03	25.64	4.89	20.93	0.48	24.30	5.75	218.89
Variance 0			0.27	-0.03	0.61			-0.02	-0.63
Variance 1			-0.19	-0.01	0.20			-0.05	-2.09
Variance 2			0.32	0.00	-0.33			-0.09	-1.77

Notes

Grab Samples

GWA-13
3 bottles; samples collected at 1235

Product Name: Low-Flow System

Date: 2016-08-09 12:45:28

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 444108
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 51 ft

Pump placement from TOC 45 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49.90 ft
Screen Length 10 ft
Depth to Water 24.68 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3312217 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.56 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	12:21:56	600.02	25.78	5.38	33.67	1.03	25.05	4.51	101.85
Last 5	12:26:56	900.02	25.24	5.39	34.17	0.88	25.05	4.39	98.07
Last 5	12:31:56	1200.02	25.35	5.40	35.02	0.74	25.05	4.47	94.67
Last 5	12:36:56	1500.02	25.48	5.42	35.35	0.83	25.06	4.48	92.62
Last 5	12:41:56	1800.02	25.01	5.41	35.38	0.92	25.06	4.38	91.13
Variance 0			0.11	0.01	0.85			0.08	-3.40
Variance 1			0.13	0.02	0.33			0.02	-2.05
Variance 2			-0.47	-0.00	0.03			-0.10	-1.48

Notes

Sample time 12:45

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-09 12:05:31

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.30 ft
Screen Length 10 ft
Depth to Water 20.29 ft

Pumping Information:

Final Pumping Rate 240 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 3.96 in
Total Volume Pumped 3.84 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		+/- 10%	+/- 20
Last 5	11:55:49	180.14	22.98	4.99	24.15	1.07	20.61	7.27	160.42
Last 5	11:58:49	360.02	22.94	5.01	24.13	1.62	20.62	7.24	157.39
Last 5	12:01:49	540.02	22.94	5.01	23.95	0.44	20.62	7.17	156.18
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.05	0.01	-0.02			-0.03	-3.03
Variance 2			-0.00	0.01	-0.18			-0.06	-1.21

Notes

Started purge at 1146
No issues. Good well.

Grab Samples

GWA-15

Product Name: Low-Flow System

Date: 2016-08-09 13:51:50

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 23.18 ft

Pumping Information:

Final Pumping Rate 240 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 5.52 in
Total Volume Pumped 10.12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	13:29:01	1260.02	23.18	5.09	21.47	1.37	23.64	7.27	149.44
Last 5	13:32:01	1440.02	23.36	5.11	21.57	0.53	23.64	7.27	149.15
Last 5	13:35:01	1620.02	23.50	5.10	21.29	0.55	23.64	7.21	149.07
Last 5	13:38:01	1800.02	23.56	5.07	21.45	--	--	7.18	149.72
Last 5	13:41:01	1980.02	23.43	5.07	21.49	--	--	7.20	150.32
Variance 0			0.14	-0.02	-0.28			-0.06	-0.08
Variance 1			0.06	-0.03	0.16			-0.02	0.65
Variance 2			-0.12	0.00	0.04			0.02	0.60

Notes

Purge started at 13:03
No issues, continued purge while waiting for sample bottles to be delivered

Grab Samples

GWA-16
1347

Product Name: Low-Flow System

Date: 2016-08-10 09:30:29

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.50 ft
Screen Length 10 ft
Depth to Water 15.24 ft

Pumping Information:

Final Pumping Rate 235 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 2.76 in
Total Volume Pumped 4.7 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%	+/- 10		+/- 10%	+/- 20
Last 5	09:16:59	180.07	22.21	5.17	62.39	0.75	15.45	3.67	147.06
Last 5	09:19:59	360.02	22.11	5.16	60.39	0.63	15.46	3.74	141.93
Last 5	09:22:59	540.02	22.22	5.15	58.74	0.64	15.47	3.82	140.41
Last 5	09:25:59	720.02	22.09	5.15	57.73	0.59	15.47	3.90	139.45
Last 5									
Variance 0			-0.10	-0.01	-2.00			0.08	-5.13
Variance 1			0.11	-0.01	-1.65			0.07	-1.52
Variance 2			-0.13	-0.01	-1.01			0.08	-0.96

Notes

Started purging at 0906, lag due to filling out paperwork
No issues.

Grab Samples

GWC-1
Sample time 09:30

Product Name: Low-Flow System

Date: 2016-08-10 13:59:25

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC-McIntosh
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 27.97 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.4631712 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 19.7 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			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:35:10	2700.81	24.38	4.78	57.01	0.31	28.01	6.17	225.30
Last 5	13:40:10	3000.81	24.31	4.79	57.49	0.38	28.01	6.17	219.52
Last 5	13:45:10	3300.81	24.46	4.78	56.59	0.33	28.01	6.11	216.20
Last 5	13:50:10	3600.81	24.38	4.78	56.58	0.26	28.91	6.10	211.91
Last 5	13:55:10	3900.82	24.27	4.78	56.65	0.30	28.01	6.18	208.82
Variance 0			0.15	-0.01	-0.90			-0.06	-3.32
Variance 1			-0.08	-0.00	-0.02			-0.01	-4.29
Variance 2			-0.10	0.00	0.07			0.08	-3.09

Notes

Well Volume Purge Method
Well Volume Purge Method. All Parameters Stable. Sampled at 1400

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-10 11:06:41

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC-McIntosh
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 33.5 ft
Screen Length 10 ft
Depth to Water 24.15 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.4274638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 18.5 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	+/- 10
Last 5	10:40:11	2708.28	22.22	6.16	154.89	0.48	24.22	3.24	103.82
Last 5	10:45:11	3008.28	22.31	6.13	152.07	0.50	24.22	3.26	105.59
Last 5	10:50:16	3313.28	22.29	6.15	156.43	0.47	24.22	3.20	103.39
Last 5	10:55:16	3613.28	22.37	6.13	149.82	0.60	24.23	3.22	105.34
Last 5	11:00:16	3913.28	22.25	6.12	153.46	0.44	24.23	3.23	107.34
Variance 0			-0.02	0.02	4.36			-0.06	-2.20
Variance 1			0.08	-0.02	-6.61			0.02	1.95
Variance 2			-0.12	-0.01	3.64			0.02	2.00

Notes

Well Volume Sampling Method
All Parameters Stable. 3 Well volumes purged. Sampled at 11:05

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-10 11:31:12

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 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Geocontrol
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 36.5 ft

Pump placement from TOC 38.5 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.50 ft
Screen Length 10 ft
Depth to Water 32.83 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4626391 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 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			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	11:05:40	3300.01	23.79	6.25	109.98	1.90	32.90	2.81	96.57
Last 5	11:10:40	3600.01	24.10	6.24	108.21	2.22	32.90	2.82	99.07
Last 5	11:15:40	3900.01	24.06	6.24	108.42	1.83	32.90	2.83	98.82
Last 5	11:20:40	4200.01	24.19	6.23	106.29	2.04	32.90	2.84	100.45
Last 5	11:25:46	4506.01	24.00	6.22	104.60	2.03	32.90	2.85	102.28
Variance 0			-0.04	-0.01	0.21			0.01	-0.26
Variance 1			0.13	-0.01	-2.13			0.01	1.64
Variance 2			-0.19	-0.01	-1.69			0.02	1.82

Notes

1) 3 well volumes (19.87 L) needed to be purged before collecting samples and 2) internal bladder pump volume should be changed from 200 mL to 121 mL

Grab Samples

GWC-11
3 bottles; samples collected at 1135

Product Name: Low-Flow System

Date: 2016-08-10 10:40:02

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
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 36 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.31 ft
Screen Length 10 ft
Depth to Water 26.50 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 3.48 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	10:28:29	180.02	22.44	5.10	24.13	0.59	26.85	5.75	141.63
Last 5	10:31:29	360.02	22.32	5.11	24.10	0.78	26.86	5.74	140.98
Last 5	10:37:29	720.02	22.27	5.12	23.97	0.69	26.88	5.82	140.80
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.12	0.00	-0.03			-0.01	-0.65
Variance 2			-0.05	0.01	-0.13			0.07	-0.18

Notes

Started purging at 1019. Well depth in provided table is incorrect at 18.15. Had to measure well depth before sampling. Turbidity is still fine, No issues.

Grab Samples

GWC-12
Sample time 10:40

Product Name: Low-Flow System

Date: 2016-08-09 14:30:49

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 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Pegasus peristaltic
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 35.05 ft

Pump placement from TOC 35.05 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 10 ft
Depth to Water 26.62 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2557808 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.28 in
Total Volume Pumped 4.25 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	+/- 20
Last 5	14:07:14	600.01	25.73	5.11	31.94	1.04	26.89	4.20	205.33
Last 5	14:12:14	900.01	25.90	5.10	32.46	0.84	26.90	4.20	202.11
Last 5	14:17:14	1200.01	25.92	5.09	32.99	0.79	26.89	4.11	199.26
Last 5	14:22:14	1500.01	25.85	5.09	32.75	0.67	26.90	3.96	196.72
Last 5	14:27:14	1800.01	26.15	5.09	32.99	0.60	26.90	3.94	195.66
Variance 0			0.01	-0.01	0.53			-0.09	-2.85
Variance 1			-0.06	0.00	-0.25			-0.14	-2.54
Variance 2			0.30	-0.00	0.25			-0.02	-1.07

Notes

Grab Samples

GWC-17
3 bottles; samples collected at 1435

Product Name: Low-Flow System

Date: 2016-08-11 10:14:11

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC-McIntosh
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type GeoControl Pro
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 38.25 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.2 ft
Screen Length 10 ft
Depth to Water 35.09 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.411854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 15 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	+/- 10
Last 5	09:50:08	2400.01	21.06	6.47	169.97	3.11	35.60	2.62	97.09
Last 5	09:55:08	2700.01	21.14	6.45	167.12	2.63	35.61	2.68	95.49
Last 5	10:00:08	3000.01	21.11	6.45	163.25	2.50	35.59	3.01	96.08
Last 5	10:05:08	3300.01	21.11	6.45	161.43	2.37	35.56	2.83	95.02
Last 5	10:10:08	3600.01	21.13	6.42	161.46	2.03	35.60	2.96	95.89
Variance 0			-0.04	0.00	-3.87			0.32	0.59
Variance 1			-0.00	-0.01	-1.82			-0.18	-1.06
Variance 2			0.02	-0.02	0.03			0.13	0.88

Notes

3 Well Volumes need to be purged before sampling
All parameters stable. > 3 Well volumes purged. Sampled at 1015

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-10 17:19:16

Project Information:

Operator Name K Prine
Company Name ERM
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis
Tubing Type poly
Tubing Diameter 0.17 in
Tubing Length 26 ft

Pump placement from TOC 8 ft

Well Information:

Well ID GWC19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.03 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.206049 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.23 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	16:57:03	6299.98	25.37	5.78	81.44	0.07	29.10	2.22	77.78
Last 5	17:02:03	6599.98	25.26	5.77	79.86	0.37	29.17	2.33	77.26
Last 5	17:07:03	6899.94	22.48	5.78	79.87	0.32	29.24	2.35	78.18
Last 5	17:12:03	7199.94	22.10	5.80	80.87	0.33	29.27	2.33	77.15
Last 5	17:17:03	7499.94	22.15	5.79	80.93	--	--	2.33	74.91
Variance 0			-2.78	0.01	0.01			0.02	0.92
Variance 1			-0.38	0.02	1.00			-0.02	-1.03
Variance 2			0.05	-0.00	0.06			-0.00	-2.24

Notes

3 well volumes needed to be purged before collecting samples

Grab Samples

GWC-19

3 bottles; samples collected at 1725

Product Name: Low-Flow System

Date: 2016-08-10 12:39:11

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 31 ft

Pump placement from TOC 26 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.10 ft
Screen Length 10 ft
Depth to Water 22.30 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 14.75 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%	+/- 10		+/- 10%	+/- 20
Last 5	12:24:49	2520.00	21.29	4.83	54.04	0.18	22.35	4.48	141.22
Last 5	12:27:49	2700.00	21.33	4.83	53.42	0.32	22.35	4.48	141.44
Last 5	12:30:49	2880.00	21.33	4.83	53.76	0.34	22.35	4.48	142.02
Last 5	12:33:49	3060.00	21.28	4.85	52.80	0.19	22.35	4.50	140.80
Last 5	12:36:49	3240.00	21.08	4.84	52.73	0.16	22.35	4.51	140.81
Variance 0			-0.00	0.00	0.34			0.00	0.58
Variance 1			-0.04	0.01	-0.95			0.03	-1.22
Variance 2			-0.20	-0.00	-0.07			0.01	0.01

Notes

Purged to 3 well volumes. Good recharge. Pulled Dup-2 here.

Grab Samples

GWC-20
Sample time 12:40
DUP-2
Sample time 12:40

Product Name: Low-Flow System

Date: 2016-08-10 12:53:40

Project Information:

Operator Name K Prime
Company Name ERM
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis
Tubing Type poly
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC21
Well diameter 2 in
Well Total Depth 27.16 ft
Screen Length 10 ft
Depth to Water 20.15 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.23 in
Total Volume Pumped 17 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	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	12:25:37	600.02	25.13	5.12	40.23	0.30	20.39	4.74	100.13
Last 5	12:30:37	900.02	25.69	5.11	40.02	0.46	20.39	4.78	98.29
Last 5	12:35:36	1198.91	25.06	5.12	39.82	0.31	20.38	4.79	98.71
Last 5	12:40:36	1498.91	24.74	5.12	40.25	0.33	20.38	4.80	97.69
Last 5	12:45:36	1798.91	25.60	5.11	40.58	--	--	4.78	96.69
Variance 0			-0.64	0.01	-0.19			0.01	0.42
Variance 1			-0.32	-0.01	0.43			0.01	-1.02
Variance 2			0.86	-0.00	0.33			-0.02	-1.00

Notes

Prior to sampling, purged >3 well volumes. 14 liters.

Grab Samples

LF #4: GWC-22

(data collected on 8/10/16)

GROUNDWATER SAMPLING LOG SHEET										
Client: <u>APC</u>		Project No.: <u>0337351</u>		Sampling Date: <u>8/11/2016</u>						
Site: <u>Plant McIntosh</u>		Location: <u>LF#4</u>		Sampler's Name: <u>BT</u>						
Well ID: <u>GWC-22</u>		Bump Type/Model: <u>Pedarus penstatic</u>		Sample Collection Time: <u>08:40</u>						
Total Depth (ft): <u>31.05 (31.57)</u>		Tubing Material: <u>poly</u>		Sample Purge Rate (L/min): <u>100</u>						
Depth to Water (ft): <u>26.75</u>		Pump Intake Depth (ft): <u>29.5</u>		Sample ID: <u>GWC-22</u>						
Well Diameter (in): <u>2</u>		Start/Stop Purge Time: <u>1350 + 1417 / 1405 + 1508</u>		Laboratory Analyses: <u>CCR</u>						
Well Volume (gal) = 0.041d ² h: <u>0.80</u>		Purge Rate (L/min): <u>100 - 400</u>		QA/QC Collected?: <u>No</u>						
Well Volume (L) = gal * 3.785: <u>3.04</u>		Total Purge Volume (L): <u>13.5 @ 1508</u>		QA/QC I.D.: <u>Ø</u>						
d = well diameter (inches) h = length of water column (feet)		Purge Method: <u>Low-Flow</u> Well Volume Other:								
Well Type: <u>Stick Up</u>		Sampling Method: <u>Pump Discharge</u> Other:								
Well Lock: <u>Yes</u> No										
Well Bolted: <u>Yes</u> No Bolts Needed: <u>N/A</u>										
Well Cap Condition: <u>Good</u> Replace Other: <u>N/A</u>										
Well Tag Present: <u>Yes</u> No Water in Vault: <u>Yes</u> No				All sample containers requiring chemical preservation properly preserved prior to demob from well? <u>Yes</u> No						
Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	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.)
1417	START	START	START	START	START	START	START	START	START	START
1350	START	START	START	START	START	START	START	START	START	START
1354	START	START	START	START	START	START	START	START	START	START
1359	28.36	160.12	3.97	6.13	147.20	2.77	100	0.500	26.95	clear, no odor
1404	29.63	161.38	5.47	6.32	141.58	2.43	100	1.000	26.95	"
1422	24.06	281.2	0.30	6.31	18.4	3.16	100	1.500	27.18	"
1427	21.77	241.8	0.68	6.28	28.7	3.55	100	2.000	27.50	"
1432	21.06	280.9	0.19	6.32	9.9	6.32	400	4.000	28.12	"
1437	22.12	319.4	0.17	6.27	-35.0	36.44	400	6.000	28.83	"
1442	23.61	317.3	0.20	6.25	-52.3	71.22	400	8.000	29.05	silty turbidity; no odor
1447	24.00	319.8	0.21	6.23	-53.1	105	100	8.500	29.55	"
1452	24.24	321.2	0.22	6.23	-64.1	112	100	9.000	29.75	"
1457	24.01	324.3	0.26	6.24	-73.1	220	100	9.500	29.95	past 3 well volumes (9.12L)
1502						114	400	29.85 AS	29.95	attempt to run well dry 11.5L
1507							400	30.80	30.80	13.5L
8/11/2016	Return to Sample well - DTW 26.74' btoc, 3.92 NTUs - Sample rate 100 mL/min									
Stabilizing Criteria ^{4,5}	+/- 5%	0.2 mg/L or 10% whichever is greater ⁽⁹⁾	+/- 0.2 unit			<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft	

stop pump @ 1405 & start pump @ 1417

Note: 3 well volumes needed to be purged before collecting samples

Note: First attempt: stop pump @ 1405
Second attempt: start pump @ 1417
Third attempt: stop pump @ 1508

Note: well dry @ 1508 so stopped pump

- (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. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
- (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)

Purge Log QA/QC'd By:
Date:

Purge Log QA/QC'd By:
Date:

Product Name: Low-Flow System

Date: 2016-08-10 16:05:47

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 38 ft

Pump placement from TOC 31 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33 ft
Screen Length 10 ft
Depth to Water 27.81 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2596101 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 15.72 in
Total Volume Pumped 9.6 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	+/- 5%	+/- 10		+/- 10%	+/- 20
Last 5	15:49:28	3420.01	26.47	6.37	188.78	0.51	29.10	0.35	-33.27
Last 5	15:52:28	3600.01	26.56	6.37	187.26	0.40	29.10	0.35	-31.54
Last 5	15:55:28	3780.01	26.46	6.36	186.23	0.38	29.11	0.35	-29.30
Last 5	15:58:28	3960.01	26.47	6.35	182.29	0.40	29.11	0.36	-27.66
Last 5	16:01:28	4140.01	26.33	6.34	179.75	0.26	29.12	0.37	-26.70
Variance 0			-0.10	-0.01	-1.03			0.01	2.24
Variance 1			0.00	-0.01	-3.94			0.00	1.64
Variance 2			-0.13	-0.01	-2.53			0.01	0.97

Notes
Purged 3 well volumes. Poor recharge. Varying purge rate before taking readings, from ~200 down to 100 mL/min

Grab Samples
GWC-23
Sample time 16:05

Product Name: Low-Flow System

Date: 2016-09-26 17:04:12

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 28.5 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 16.81 ft

Pumping Information:

Final Pumping Rate 240 mL/min
Total System Volume 0.2172076 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 1.8 in
Total Volume Pumped 5.29 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		+/- 0.2	+/- 100
Last 5	16:51:33	180.08	22.26	4.76	37.79	1.18	16.95	4.91	53.12
Last 5	16:54:33	360.02	22.17	4.77	37.54	0.60	16.95	4.87	52.73
Last 5	16:57:33	540.02	22.08	4.76	38.01	0.16	16.96	4.88	53.60
Last 5	17:00:33	720.02	22.11	4.74	38.05	0.05	16.96	4.84	54.48
Last 5									
Variance 0			-0.09	0.01	-0.24			-0.03	-0.39
Variance 1			-0.09	-0.02	0.46			0.01	0.88
Variance 2			0.03	-0.02	0.04			-0.05	0.87

Notes

Started purge at 1638. No issues. Clear, no odor. Sample rate also 240 mL/min

Grab Samples

GWA-2
Sample time 1705

Product Name: Low-Flow System

Date: 2016-09-27 08:56:44

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 40 ft

Pump placement from TOC 34 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 19.9 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4791935 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 53.88 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:34:04	2400.02	21.82	5.28	29.17	0.51	23.90	5.50	176.66
Last 5	08:39:04	2699.97	21.90	5.27	29.34	0.68	24.05	5.43	177.31
Last 5	08:44:04	2999.97	21.95	5.26	29.42	0.54	24.21	5.40	177.84
Last 5	08:49:04	3299.97	22.09	5.25	29.58	0.92	24.31	5.41	178.37
Last 5	08:54:04	3599.97	22.22	5.25	29.42	0.88	24.39	5.32	178.36
Variance 0			0.05	-0.01	0.08			-0.03	0.53
Variance 1			0.13	-0.00	0.16			0.01	0.53
Variance 2			0.13	-0.00	-0.16			-0.09	-0.01

Notes

Sample taken at 0910.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-27 09:03:54

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh LF4
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 42 ft

Pump placement from TOC 34 ft

Well Information:

Well ID GWA-4R continued
Well diameter 2 in
Well Total Depth 39 ft
Screen Length 10 ft
Depth to Water 24.62 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5274637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.05 in
Total Volume Pumped 13 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	08:41:50	2699.94	21.20	5.98	66.37	2.48	25.07	0.76	-31.45
Last 5	08:46:50	2999.94	21.24	5.97	62.88	2.40	25.07	0.78	-28.80
Last 5	08:51:50	3299.94	21.29	5.93	60.36	3.07	25.07	0.84	-24.35
Last 5	08:56:50	3599.94	21.30	5.91	58.39	3.05	25.07	0.84	-21.15
Last 5	09:01:50	3899.94	21.37	5.89	56.97	2.44	25.07	0.89	-17.39
Variance 0			0.05	-0.04	-2.52			0.06	4.46
Variance 1			0.02	-0.02	-1.96			0.00	3.19
Variance 2			0.07	-0.02	-1.43			0.05	3.76

Notes

Continued from 9/26/16. Parameter stable

Grab Samples

GWA-4R
Sampling at 0905

Product Name: Low-Flow System

Date: 2016-09-27 08:50:05

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 28.5 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.50 ft
Screen Length 10 ft
Depth to Water 23.78 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2172076 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 3.48 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%	+/- 10		+/- 10%	+/- 100
Last 5	08:38:25	180.13	20.83	5.59	36.42	0.12	24.07	6.60	57.77
Last 5	08:41:25	360.02	20.83	5.59	37.33	0.36	24.07	6.61	57.73
Last 5	08:44:25	540.02	20.83	5.60	37.17	0.38	24.07	6.63	57.53
Last 5	08:47:25	720.02	20.87	5.59	38.35	0.43	24.07	6.62	57.51
Last 5									
Variance 0			-0.00	0.00	0.91			0.01	-0.04
Variance 1			0.01	0.01	-0.16			0.01	-0.20
Variance 2			0.04	-0.01	1.19			-0.01	-0.02

Notes

Started purge at 0827
Sample rate also 250 mL/min. No issues. Clear, no odor. Dup-1 collected here.

Grab Samples

GWA-5
Sample Time 0852
Dup-1
Sample time 0852

Product Name: Low-Flow System

Date: 2016-09-27 10:11:02

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 28.5 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.14 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2172076 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 0.6 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	09:56:58	360.02	21.28	5.12	19.92	2.37	24.19	7.00	47.36
Last 5	09:59:58	540.02	21.28	5.10	20.26	2.65	24.19	6.99	48.09
Last 5	10:02:58	720.02	21.15	5.05	21.01	1.39	24.19	6.91	48.78
Last 5	10:05:58	900.02	21.19	5.03	21.45	1.08	24.19	6.82	49.44
Last 5	10:08:58	1080.02	21.19	5.02	21.68	0.72	24.19	6.77	50.09
Variance 0			-0.13	-0.05	0.75			-0.08	0.69
Variance 1			0.04	-0.03	0.44			-0.09	0.65
Variance 2			0.00	-0.00	0.22			-0.05	0.65

Notes

Start purge at 0948
Sample rate also 250 mL/min. No issues. Clear, no odor.

Grab Samples

GWA-13
Sample time 1014

Product Name: Low-Flow System

Date: 2016-09-27 11:02:20

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh LF4
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 52 ft

Pump placement from TOC 44 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49 ft
Screen Length 10 ft
Depth to Water 24.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.572098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.11 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:39:51	600.02	23.03	5.40	29.49	7.04	25.18	5.61	94.24
Last 5	10:44:51	900.02	22.79	5.39	29.54	5.16	25.27	5.69	91.50
Last 5	10:49:51	1200.02	22.52	5.41	30.20	3.31	25.28	5.58	88.84
Last 5	10:54:51	1500.02	22.74	5.42	30.70	2.39	25.28	5.53	88.01
Last 5	10:59:52	1801.02	22.85	5.42	30.25	2.38	25.28	5.50	87.73
Variance 0			-0.27	0.02	0.66			-0.11	-2.66
Variance 1			0.22	0.01	0.50			-0.05	-0.83
Variance 2			0.11	-0.00	-0.45			-0.03	-0.28

Notes

Parameters stable. Sampling at .200L/min

Grab Samples

GWA-14
Sampling at 1104

Product Name: Low-Flow System

Date: 2016-09-27 10:41:52

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.30 ft
Screen Length 10 ft
Depth to Water 20.40 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.493383 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.4 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	10:25:04	300.03	23.34	5.20	22.60	2.52	20.58	6.78	205.85
Last 5	10:30:04	599.99	23.38	5.18	22.71	1.25	20.59	6.76	199.63
Last 5	10:35:04	900.03	23.39	5.23	22.86	0.79	20.60	6.81	193.48
Last 5	10:40:04	1200.01	23.28	5.22	22.81	0.88	20.60	6.78	190.17
Last 5									
Variance 0			0.04	-0.01	0.10			-0.02	-6.21
Variance 1			0.01	0.05	0.16			0.05	-6.16
Variance 2			-0.11	-0.01	-0.05			-0.03	-3.30

Notes

Sample at 1050

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-27 11:08:34

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 41 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 23.29 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2730004 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 5.88 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%	+/- 10		+/- 10%	+/- 100
Last 5	10:57:01	180.08	21.99	5.11	22.51	0.43	23.77	7.26	48.80
Last 5	11:00:01	360.02	21.90	5.11	22.39	0.43	23.78	7.25	48.97
Last 5	11:03:01	540.02	21.99	5.11	22.73	0.33	23.78	7.25	49.63
Last 5	11:06:01	720.02	22.05	5.11	22.65	0.17	23.78	7.21	49.88
Last 5									
Variance 0			-0.09	-0.00	-0.12			-0.02	0.17
Variance 1			0.09	-0.00	0.34			0.00	0.65
Variance 2			0.05	0.00	-0.08			-0.04	0.26

Notes

Start purge at 1048
Sample rate 250mL/min. Clear, no odor. No issues.

Grab Samples

GWA-16
Sample time 1110

Product Name: Low-Flow System

Date: 2016-09-27 12:25:56

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 31 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 15.35 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 2.88 in
Total Volume Pumped 9.25 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%	+/- 10		+/- 10%	+/- 100
Last 5	12:11:51	1080.02	21.75	5.23	59.20	0.37	15.59	3.84	55.90
Last 5	12:14:51	1260.02	21.81	5.22	57.39	0.35	15.59	3.93	55.19
Last 5	12:17:51	1440.02	21.81	5.21	55.85	0.37	15.59	3.98	55.47
Last 5	12:20:51	1620.02	21.80	5.20	54.64	0.35	15.59	4.02	55.54
Last 5	12:23:51	1800.02	21.81	5.19	54.19	0.34	15.59	4.05	55.80
Variance 0			-0.00	-0.01	-1.53			0.05	0.28
Variance 1			-0.02	-0.02	-1.22			0.04	0.07
Variance 2			0.02	-0.01	-0.45			0.03	0.26

Notes

Start purge at 1147
Sample rate 250 mL/min. No issues. Clear, no odor.

Grab Samples

GWC-1
Sample time 1228

Product Name: Low-Flow System

Date: 2016-09-27 15:11:47

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 12.94 ft
Depth to Water 28.30 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4791935 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 23.75 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:48:50	2100.07	25.07	5.09	47.85	--	--	6.53	182.40
Last 5	14:53:50	2400.02	25.33	5.04	48.11	0.15	28.35	6.41	181.47
Last 5	14:58:50	2700.02	27.45	4.87	49.01	0.38	28.35	5.93	180.86
Last 5	15:03:50	3000.02	27.76	4.90	48.49	0.11	28.35	5.86	183.22
Last 5	15:08:50	3300.02	27.24	4.91	48.46	0.26	28.35	6.08	184.00
Variance 0			2.12	-0.17	0.90			-0.48	-0.61
Variance 1			0.32	0.03	-0.52			-0.07	2.36
Variance 2			-0.52	0.01	-0.04			0.22	0.78

Notes

Water level was below top of screen so 3 well volumes were purged at 0.5L/min.
3 well volumes purged at 0.5L/min. Purge rate lowered to 0.25L/min. Sample taken at 1520

Grab Samples



GROUNDWATER SAMPLING LOG SHEET



Client: GPC Project No. 0337351 Sampling Date: 9/27/16

Site: McIntosh Location: LF4 Sampler's Name: MR

Well ID: GWC-10 Pump Type/Model: Alexis Peri Sample Collection Time: 1420

Total Depth (ft): 33.5 Tubing Material: LDPE Sample Purge Rate (L/min): 200 L/min

Depth to Water (ft): 24.20 Pump Intake Depth (ft): 28 Sample ID: GWC-10

Well Diameter (in): 2 Start/Stop Purge Time: 1332 Laboratory Analyses: _____

Well Volume (gal) = 0.041d³h: 1.5 Purge Rate (L/min): 200 L/min → 500 L/min

Well Volume (L) = gal * 3.785: 5.6 L Total Purge Volume (L): 19.8

d = well diameter (inches) h = length of water column (feet) 11.2 m³ Purge Method: Low-Flow Well Volume Other _____ QA/QC Collected? No

Well Type: Flush Suck Up _____ Sampling Method: Pump Discharge Other _____ QA/QC I.D. _____

Well Lock: Yes No _____

Well Bolted: Yes No Bolts Needed: _____

Well Cap Condition: Replace Other _____

Well Tag Present: Yes No Water in Vault: Yes No No

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H ₂ O Depth (ft bloc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1337	26.39	300.1	0.87	6.45	72.0	4.04	500	2.5	24.25	
1343	25.19	242.9	1.11	6.93	62.8	3.67	↓	5.6	24.25	1 st WV
1354	23.7	206.8	2.05	6.65	65.8	2.87		11.2	24.25	2 nd WV
1405	26.66	145.9	3.57	6.29	72.5	2.47		16.8	24.25	3 rd WV Dec PIC to 260mL
1407	22.58	141.5	3.63	6.28	70.2	1.27	200	17.8	24.24	
1412	24.56	164.9	3.79	6.29	71.0	1.16	↓	18.8	24.24	
1417	24.78	198.8	3.67	6.29	70.9	2.19		19.8	24.24	
Parameters Stable										
Sampling @ 1420										
TD-32.32										
Stabilizing Criteria ^{1,2}		+/- 5%	0.2 mg/L or 10% whichever is greater ⁽³⁾	+/- 0.1 unit		<5 NTUs	>100 mL < 500 mL	>3L	<0.33 ft	

(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. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft
 (7) - Contact field team 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)

Purge Log QA/QC'd By: _____
 Date: _____

Purge Log QA/QC'd By: _____
 Date: _____

Product Name: Low-Flow System

Date: 2016-09-27 15:02:36

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 QED Sample Pro
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 50 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.50 ft
Screen Length 10 ft
Depth to Water 32.87 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.5131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 21.5 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%	+/- 10		+/- 10%	+/- 100
Last 5	14:40:00	3300.01	21.98	6.37	108.82	1.06	32.92	2.68	34.74
Last 5	14:45:00	3600.00	22.58	6.40	107.25	1.23	32.92	2.72	33.90
Last 5	14:50:00	3900.01	22.80	6.38	104.48	1.11	32.92	2.78	36.71
Last 5	14:55:00	4200.01	22.98	6.37	101.93	0.92	32.92	2.84	35.17
Last 5	15:00:00	4500.01	23.01	6.33	100.42	0.77	32.02	2.89	35.51
Variance 0			0.22	-0.02	-2.77			0.06	2.81
Variance 1			0.18	-0.01	-2.55			0.07	-1.54
Variance 2			0.03	-0.04	-1.51			0.05	0.34

Notes

Started purge at 1334. 3 well-volume purge.
Clear, no odor. No issues. Sample rate 250 mL/min

Grab Samples

GWC-11
Sample time 1504

Product Name: Low-Flow System

Date: 2016-09-27 13:11:50

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 38 ft

Pump placement from TOC 30 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 15.91 ft
Depth to Water 26.68 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4697339 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.36 in
Total Volume Pumped 27.5 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		+/- 10%	+/- 10
Last 5	12:47:57	2699.94	23.93	5.44	0.00	--	--	7.53	67.14
Last 5	12:52:57	2999.94	23.26	5.35	31.78	--	--	4.71	168.26
Last 5	12:58:01	3303.94	24.15	5.35	31.63	0.32	27.07	4.69	165.10
Last 5	13:03:01	3603.94	24.51	5.34	31.54	1.81	27.07	4.66	162.87
Last 5	13:08:01	3903.94	24.56	5.32	31.70	1.72	27.07	4.63	162.98
Variance 0			0.89	-0.00	-0.15			-0.02	-3.15
Variance 1			0.36	-0.01	-0.09			-0.03	-2.24
Variance 2			0.05	-0.02	0.15			-0.02	0.11

Notes

3 well volumes purged since water level was below top of screen. Purge rate lowered to 0.4 after 2 well volumes and lowered to 0.2 after 3 well volumes. Sample taken at 1320.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-28 10:01:42

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 50 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.20 ft
Screen Length 10 ft
Depth to Water 35.30 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.16 in
Total Volume Pumped 13.2 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	09:38:24	2100.02	21.28	6.58	160.02	3.04	35.73	2.53	67.05
Last 5	09:43:24	2400.02	21.36	6.58	159.63	2.87	35.73	2.63	66.72
Last 5	09:48:24	2700.02	21.39	6.56	157.93	2.71	35.73	2.67	66.49
Last 5	09:53:24	3000.02	21.38	6.56	158.46	2.21	35.73	2.76	65.64
Last 5	09:58:24	3300.02	21.37	6.57	156.71	1.83	35.73	2.81	64.78
Variance 0			0.03	-0.02	-1.70			0.04	-0.24
Variance 1			-0.01	0.01	0.53			0.09	-0.85
Variance 2			-0.01	0.01	-1.75			0.06	-0.86

Notes

Started purge at 0852
3 well-volume purge. Clear, no odor. No issues. Sample rate 200 mL/min.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-28 09:08:01

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.25 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4791935 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.76 in
Total Volume Pumped 17 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	08:43:22	1200.02	21.24	5.94	72.89	0.19	29.48	3.30	119.63
Last 5	08:48:22	1500.02	21.37	5.92	73.47	--	--	3.24	119.97
Last 5	08:53:22	1800.02	21.42	5.94	73.50	0.14	29.48	3.35	119.74
Last 5	08:58:22	2100.02	21.69	5.92	73.35	0.15	29.48	3.46	121.06
Last 5	09:03:22	2399.97	21.82	5.90	75.05	0.27	29.48	3.31	121.15
Variance 0			0.05	0.02	0.02			0.11	-0.23
Variance 1			0.26	-0.02	-0.15			0.11	1.32
Variance 2			0.13	-0.02	1.70			-0.16	0.09

Notes

3 well volumes purged since water level was below top of screen. Purge rate lowered to 0.2L/min after 3 well volumes. Sample taken at 910. DUP-2 taken.

Grab Samples

DUP-2

Duplicate radium, metal, and inorganic

GWC-19

radium, metals, inorganics

Product Name: Low-Flow System

Date: 2016-09-27 16:57:45

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 33 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.13 ft
Screen Length 10 ft
Depth to Water 22.47 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4460846 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.36 in
Total Volume Pumped 19 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	16:35:13	1499.99	23.21	5.47	44.66	--	--	4.22	180.04
Last 5	16:40:13	1799.99	22.94	5.48	45.05	0.58	22.58	4.18	177.29
Last 5	16:45:13	2099.99	23.54	5.40	45.40	0.48	22.58	4.44	175.47
Last 5	16:50:13	2399.99	24.20	5.35	44.44	0.45	22.58	4.44	173.80
Last 5	16:55:13	2699.99	24.08	5.32	45.49	0.78	22.58	4.42	172.41
Variance 0			0.60	-0.08	0.35			0.26	-1.82
Variance 1			0.66	-0.05	-0.96			-0.00	-1.67
Variance 2			-0.12	-0.03	1.05			-0.02	-1.39

Notes

3 well volumes purged since water level was below top of screen. Purge rate lowered to 0.2L/min after 3 well volumes. Sample taken at 1705.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-27 16:48:16

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Landfill 4
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 35 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 26.30 ft
Screen Length 10 ft
Depth to Water 20.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 9 in
Total Volume Pumped 11.4 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	16:30:49	2160.02	22.75	5.06	40.07	0.24	21.12	5.07	43.74
Last 5	16:33:49	2340.02	22.71	5.06	40.02	0.20	21.12	5.07	44.19
Last 5	16:36:49	2520.02	22.80	5.05	39.77	0.19	21.12	5.04	43.90
Last 5	16:39:49	2700.02	22.80	5.05	39.86	0.19	21.13	5.14	44.17
Last 5	16:45:50	3061.02	22.84	5.06	39.80	0.16	21.13	5.10	44.63
Variance 0			0.09	-0.00	-0.25			-0.03	-0.29
Variance 1			-0.01	-0.00	0.09			0.10	0.27
Variance 2			0.05	0.01	-0.06			-0.04	0.46

Notes

Started purge at 1548. 3well-volume. Started at 150 mL/ min
SmarTroll didn't record what should have been the last set of readings, so went one further. Clear, no odor. Sample rate 200 mL/min.

Grab Samples

GWC-21
Sample time 1649

Product Name: Low-Flow System

Date: 2016-09-27 16:20:16

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh LF4
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 32 ft

Pump placement from TOC

27 ft 

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 31.65 ft
Screen Length 10 ft
Depth to Water 26.95 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4828295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.25 in
Total Volume Pumped 10.8 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	15:57:33	2099.92	21.52	6.56	256.05	10.20	29.54	0.38	14.24
Last 5	16:02:33	2399.92	21.67	6.46	263.33	11.60	29.70	0.23	17.36
Last 5	16:07:34	2700.92	22.00	6.40	285.01	42.00	29.90	0.24	12.10
Last 5	16:12:34	3000.92	22.74	6.42	300.67	68.00	30.05	0.25	-24.69
Last 5	16:17:34	3300.92	21.67	6.42	290.57	1271.00	30.40	0.26	-15.32
Variance 0			0.33	-0.06	21.68			0.01	-5.27
Variance 1			0.74	0.02	15.67			0.01	-36.78
Variance 2			-1.07	-0.00	-10.10			0.01	9.36

Notes

Well dry at 30.94. Parameters were not stable. Sampling tomorrow morning (9-28-2016)

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-28 13:01:34

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh LF 4
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 35 ft

Pump placement from TOC 29 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.7 ft
Screen Length 14 ft
Depth to Water 28.11 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.4555444 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.84 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:32:55	6002.82	29.29	6.31	151.26	--	--	0.36	-42.29
Last 5	12:37:55	6302.85	28.91	6.32	145.41	2.52	29.18	0.35	-39.93
Last 5	12:42:55	6602.83	30.46	6.27	144.46	1.36	29.18	0.34	-40.77
Last 5	12:52:55	7202.82	28.60	6.35	137.87	1.44	29.18	0.35	-36.39
Last 5	12:57:55	7502.82	28.63	6.29	138.07	1.57	29.18	0.35	-36.95
Variance 0			1.55	-0.05	-0.95			-0.01	-0.83
Variance 1			-1.86	0.08	-6.59			0.01	4.37
Variance 2			0.03	-0.05	0.19			-0.00	-0.56

Notes

3 well volumes purged since water level was below top of screen at 0.1L/min. Tubing was chased down with water level. At 1247 smartroll skipped a reading. Sample taken at 1305.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-15 12:44:30

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 29 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 14.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4771653 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.76 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			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 50
Last 5	12:22:11	2099.99	20.68	5.24	63.02	1.17	15.04	3.08	140.77
Last 5	12:27:11	2399.99	20.71	5.23	59.53	1.52	15.04	3.32	140.25
Last 5	12:32:11	2699.99	20.74	5.21	56.80	1.24	15.04	3.50	139.94
Last 5	12:37:11	2999.99	20.72	5.20	55.46	1.91	15.04	3.65	139.58
Last 5	12:42:11	3299.88	20.71	5.20	54.88	1.73	15.04	3.69	138.98
Variance 0			0.02	-0.02	-2.74			0.18	-0.31
Variance 1			-0.02	-0.01	-1.33			0.14	-0.36
Variance 2			-0.01	-0.00	-0.58			0.04	-0.60

Notes

Weather is sunny. Temperature is 54F. Sample at 1245

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-15 09:33:01

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 32 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 16.35 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:05:28	600.02	15.93	4.92	48.40	1.21	16.47	5.14	155.95
Last 5	09:10:28	900.01	17.81	4.86	42.95	1.18	16.50	5.05	153.11
Last 5	09:15:28	1200.02	18.97	4.83	40.09	1.09	16.52	4.97	149.90
Last 5	09:20:28	1500.02	19.46	4.81	39.60	0.69	16.53	4.91	148.22
Last 5	09:25:28	1800.03	19.77	4.80	39.53	1.12	16.53	4.82	145.77
Variance 0			1.16	-0.03	-2.85			-0.08	-3.21
Variance 1			0.49	-0.02	-0.50			-0.07	-1.67
Variance 2			0.31	-0.02	-0.06			-0.09	-2.45

Notes

0855 start purge@250mL/min; 0925 all parameters stable; 0930 collect samples@250mL/min

Grab Samples

GWA-2

Sampled at 0930; .5 gal, 1L, 250mL

Product Name: Low-Flow System

Date: 2016-11-14 17:18:57

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name Plant Hammond
Site Name Landfill 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41.5 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 18.7 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.275232 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.43 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	16:56:45	1800.02	20.24	4.96	29.15	0.40	22.42	6.28	127.30
Last 5	17:01:45	2100.01	20.10	4.96	29.28	0.65	22.67	6.37	124.92
Last 5	17:06:45	2400.01	20.00	4.95	29.32	0.41	22.86	6.42	124.27
Last 5	17:11:45	2700.01	19.81	4.96	29.47	0.35	23.01	6.47	122.87
Last 5	17:16:45	3000.01	19.75	4.96	29.30	0.47	23.13	6.29	123.39
Variance 0			-0.10	-0.01	0.04			0.05	-0.65
Variance 1			-0.18	0.00	0.15			0.04	-1.41
Variance 2			-0.06	0.00	-0.17			-0.18	0.52

Notes

Weather: 61°F clear

Grab Samples

GWA-3
Sample Time 1720

Product Name: Low-Flow System

Date: 2016-11-14 17:05:57

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC
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
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 48 ft

Pump placement from TOC 44 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 49 ft
Screen Length 10 ft
Depth to Water 24.34 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5670322 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		+/- 10%	+/- 50
Last 5	16:48:37	300.11	20.04	6.07	90.47	1.78	24.69	0.51	-30.76
Last 5	16:53:37	600.02	19.89	5.96	89.36	2.11	24.70	0.39	-31.76
Last 5	16:58:37	900.02	19.90	5.96	87.73	1.27	24.70	0.37	-34.27
Last 5	17:03:37	1200.02	19.75	5.94	86.38	1.68	24.70	0.39	-33.94
Last 5									
Variance 0			-0.15	-0.11	-1.11			-0.12	-1.01
Variance 1			0.01	0.00	-1.63			-0.02	-2.51
Variance 2			-0.15	-0.02	-1.35			0.02	0.34

Notes

Weather is sunny. Temperature is 63. Take sample at 1708

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-15 08:58:52

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 44 ft

Pump placement from TOC 36.5 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.5 ft
Screen Length 10 ft
Depth to Water 24.49 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5481129 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.23 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	08:35:51	300.12	19.19	5.80	35.72	0.69	24.72	6.59	155.11
Last 5	08:40:51	600.03	19.54	5.63	37.76	0.78	24.72	6.55	158.22
Last 5	08:45:51	900.02	19.53	5.57	35.71	0.67	24.72	6.51	158.74
Last 5	08:50:51	1199.98	19.79	5.57	36.44	0.59	24.72	6.43	153.57
Last 5	08:55:51	1499.98	19.68	5.58	35.47	0.62	24.72	6.39	151.11
Variance 0			-0.02	-0.06	-2.05			-0.04	0.52
Variance 1			0.26	-0.00	0.72			-0.08	-5.17
Variance 2			-0.11	0.01	-0.96			-0.04	-2.46

Notes

Weather is sunny. Temperature is 47. Sample at 0900.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-15 14:37:33

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 33.5 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 28.32 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.5386532 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 50
Last 5	14:13:44	1800.02	21.69	4.79	47.71	0.24	28.39	6.45	170.57
Last 5	14:18:44	2100.02	21.73	4.80	47.06	--	--	6.48	168.48
Last 5	14:23:44	2400.02	21.69	4.78	47.93	0.28	28.39	6.56	167.41
Last 5	14:28:44	2700.02	22.09	4.80	48.45	0.31	28.39	6.50	167.62
Last 5	14:33:43	2999.92	22.16	4.81	48.13	0.37	28.39	6.48	171.77
Variance 0			-0.05	-0.02	0.87			0.09	-1.07
Variance 1			0.40	0.02	0.53			-0.07	0.22
Variance 2			0.07	0.01	-0.32			-0.02	4.15

Notes

3 well volumes sampled since water level was <1ft above top of well screen. Purge rate lowered to 0.2L/min after 3rd well volume. Weather is sunny. Temp is 68F. Sample at 1440. DUP-2 taken.

Grab Samples



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: _____ Sampling Date: 11-15-16
 Site: Plant McIntosh Location: Landfill 4 Sampler's Name: C. Hurdle
 Well ID: GW-10 Pump Type/Model: Alexis Peristaltic Sample Collection Time: 1440
 Total Depth (ft)¹: 33.50 Tubing Material: LDPE Sample Purge Rate (L/min)³: 0.200
 Depth to Water (ft): 24.12 Pump Intake Depth (ft): 28.5 Sample ID: GW-10
 Well Diameter (in): 2 Start/Stop Purge Time: 1320 / 1435 Laboratory Analyses: 2540L, 300 ORGEM 290,
 Well Volume (gal) = 0.041d²h: 1.53 Purge Rate (L/min)²: 0.200 9315 RAZZLE, 9320 RAZZ8
 Well Volume (L) = gal * 3.785: 5.82 Total Purge Volume (L): 20.5 6020, 7470 A
 d = well diameter (inches) h = length of water column (feet) Purge Method: Low-Flow Well Volume Other: _____ QA/QC Collected? No Yes
 Well Type: Flush Stick Up Sampling Method: Pump Discharge Other: _____ QA/QC I.D. GW-10 extra radium
 Well Lock: Yes No
 Well Cap Condition: Good Replace
 Well Tag Present: Yes No

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (mS/cm) (µS/cm)	DO (%)	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.)
1325	22.39	299.0	2.34	6.67	78.0	2.87	300	1.5	24.19	*Starting water level below
1330	21.22	183.4	4.59	6.34	60.4	1.69	300	3.0	24.21	top of screen. Purging
1335	21.21	170.5	6.28	6.22	55.3	1.16	300	4.5	24.21	3 well volumes.
1340	21.22	169.0	4.56	6.22	52.3	0.77	300	6.0	24.21	1st well volume
1345	21.13	169.4	5.11	6.22	50.4	0.63	300	7.5	24.21	
1350	21.18	168.0	4.85	6.21	49.8	0.53	300	9.0	24.21	
1355	21.28	162.0	6.53	6.18	49.5	0.46	300	10.5	24.21	- 2nd well volume
1400	21.33	163.5	6.52	6.18	49.4	0.48	300	12.0	24.20	
1405	21.33	161.2	4.18	6.17	48.9	0.49	300	13.5	24.20	
1410	21.11	161.9	6.73	6.16	48.4	0.46	300	15.0	24.20	
1415	21.15	157.6	6.26	6.14	48.7	0.49	300	16.5	24.20	
1420	21.29	164.2	5.45	6.18	48.1	0.44	200	17.5	24.19	- 3rd well volume
1425	21.24	151.1	7.29	6.12	49.2	0.59	200	18.5	24.18	
1430	21.40	155.2	7.32	6.13	48.2	0.53	200	19.5	24.18	
1435	21.29	155.5	7.27	6.12	48.3	0.67	200	20.5	24.18	
Parameters and water level stable										
Turbidity < 5.00 NTU										
Sampling										
Stabilizing Criteria ^{4,5}		+/- 5%	0.2 Mg/L or 10% for DO > 0.5 mg/l (whichever is greater) ¹	+/- 0.1 unit		< 5 NTUs	> 100 mL < 250 mL	> 3L	< 0.3 ft	

- (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. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
- (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)

Product Name: Low-Flow System

Date: 2016-11-15 16:07:15

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 geocontrol pro bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 42.7 ft
Screen Length 10 ft
Depth to Water 32.73 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.390854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 18.5 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	15:43:44	2999.93	20.75	6.37	124.07	1.89	32.78	2.64	86.06
Last 5	15:48:44	3299.93	20.75	6.33	119.72	1.42	32.78	2.74	87.60
Last 5	15:53:44	3599.93	20.71	6.32	117.75	1.33	32.78	2.80	88.42
Last 5	15:58:44	3899.93	20.63	6.30	114.55	1.28	32.78	2.86	89.57
Last 5	16:03:44	4199.93	20.59	6.28	112.27	1.20	32.78	2.91	90.49
Variance 0			-0.04	-0.01	-1.97			0.06	0.82
Variance 1			-0.08	-0.02	-3.20			0.06	1.15
Variance 2			-0.04	-0.02	-2.28			0.05	0.92

Notes

Purged to 3 well volumes. Sample rate 250 mL/min. Clear, no odor. Sunny, 71. No issues.

Grab Samples

GWC-11
Sample time 1608

Product Name: Low-Flow System

Date: 2016-11-15 12:14:29

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF4
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 46.31 ft

Pump placement from TOC 36.31 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.31 ft
Screen Length 10 ft
Depth to Water 26.41 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2967011 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.21 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	11:56:59	300.03	22.45	5.19	24.51	0.56	26.55	5.94	136.14
Last 5	12:01:59	600.02	22.53	5.15	24.35	0.67	26.55	5.67	94.78
Last 5	12:06:59	900.02	22.36	5.15	24.90	0.76	26.62	5.42	88.91
Last 5	12:11:59	1200.02	22.49	5.14	24.90	0.91	26.62	5.44	86.12
Last 5									
Variance 0			0.09	-0.03	-0.16			-0.27	-41.35
Variance 1			-0.18	-0.01	0.55			-0.25	-5.87
Variance 2			0.13	-0.01	0.00			0.02	-2.79

Notes

Weather: 69•F Sunny

Grab Samples

GWC-12
Sample Time 1215

Product Name: Low-Flow System

Date: 2016-11-15 09:13:54

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF4
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 43.11 ft

Pump placement from TOC ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.01 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2824182 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 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	08:55:23	300.13	18.81	5.63	24.58	0.78	24.04	7.21	128.81
Last 5	09:00:23	600.02	19.10	5.08	22.60	0.42	24.04	6.88	111.97
Last 5	09:05:23	900.02	19.35	5.05	22.68	0.38	24.05	6.75	104.30
Last 5	09:10:23	1200.02	19.47	5.04	22.89	0.35	24.05	6.64	100.58
Last 5									
Variance 0			0.29	-0.55	-1.98			-0.34	-16.83
Variance 1			0.24	-0.03	0.08			-0.13	-7.67
Variance 2			0.12	-0.01	0.21			-0.12	-3.72

Notes

Weather: 54°F Sunny

Grab Samples

GWA-13
Sample Time 0915

Product Name: Low-Flow System

Date: 2016-11-15 10:24:25

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 53 ft

Pump placement from TOC 45 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49.90 ft
Screen Length 10 ft
Depth to Water 24.41 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5906814 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 9.36 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	10:02:13	300.09	18.92	5.35	28.23	0.38	25.18	6.04	176.18
Last 5	10:07:13	600.03	18.88	5.34	28.66	0.69	25.19	6.46	169.88
Last 5	10:12:13	900.02	18.84	5.36	29.45	0.44	25.19	6.91	164.94
Last 5	10:17:13	1200.02	18.84	5.35	29.72	0.51	25.19	6.87	162.36
Last 5	10:22:13	1500.02	18.84	5.33	29.03	0.39	25.19	6.72	158.29
Variance 0			-0.04	0.02	0.79			0.45	-4.93
Variance 1			-0.00	-0.01	0.28			-0.05	-2.58
Variance 2			-0.00	-0.02	-0.69			-0.14	-4.08

Notes

Weather is sunny. Temperature is 54F. Sample at 1025.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-15 10:46:28

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF4
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 45.3 ft

Pump placement from TOC 35.3 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.30 ft
Screen Length 10 ft
Depth to Water 20.22 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2921931 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.19 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	10:24:35	300.09	19.44	5.07	25.90	1.28	20.37	7.19	136.61
Last 5	10:29:35	600.02	19.70	5.06	25.44	2.17	20.49	7.04	101.48
Last 5	10:34:35	900.02	19.71	5.07	25.38	0.70	20.49	6.92	93.68
Last 5	10:39:35	1200.02	19.81	5.06	25.41	0.43	20.49	6.83	91.67
Last 5	10:44:34	1499.92	19.90	5.07	25.13	0.49	20.49	6.77	90.29
Variance 0			0.01	0.01	-0.06			-0.12	-7.80
Variance 1			0.10	-0.01	0.03			-0.08	-2.01
Variance 2			0.09	0.01	-0.28			-0.07	-1.39

Notes

Weather: 64°F Sunny

Grab Samples

GWA-15
Sample Time 1050

Product Name: Low-Flow System

Date: 2016-11-15 10:57:46

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 23.03 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 2.5 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	10:30:20	299.88	20.70	5.11	22.58	5.16	23.48	7.08	128.03
Last 5	10:35:20	599.87	20.53	5.11	22.62	2.65	23.48	7.05	121.20
Last 5	10:40:20	899.88	20.71	5.10	22.62	4.93	23.50	7.15	119.58
Last 5	10:45:20	1199.88	20.61	5.11	22.64	3.12	23.52	7.03	117.60
Last 5	10:50:20	1499.87	20.53	5.11	22.51	2.48	23.52	7.09	116.09
Variance 0			0.18	-0.01	-0.00			0.10	-1.61
Variance 1			-0.10	0.01	0.01			-0.12	-1.98
Variance 2			-0.08	-0.00	-0.13			0.05	-1.51

Notes

1025 start purge@250mL/min; 1050 all parameters stable; 1055 collect samples@250mL/min. Sunny 59F, light wind,*smoky air

Grab Samples

GWC-16
Sampled@1055; .5 gal, 1L, 250mL

Product Name: Low-Flow System

Date: 2016-11-15 12:16:33

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 10 ft
Depth to Water 23.38 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 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	11:45:35	600.02	20.96	5.27	38.27	3.51	26.76	4.29	100.18
Last 5	11:50:35	900.02	21.12	5.26	34.38	1.50	26.76	4.68	97.21
Last 5	11:55:35	1200.02	21.20	5.25	33.48	1.00	26.76	4.88	95.11
Last 5	12:00:35	1499.92	21.13	5.25	34.09	1.04	26.76	4.91	93.88
Last 5	12:05:35	1799.92	21.11	5.25	34.37	0.91	26.76	4.98	92.39
Variance 0			0.09	-0.01	-0.90			0.20	-2.10
Variance 1			-0.08	0.00	0.61			0.02	-1.23
Variance 2			-0.02	-0.01	0.28			0.07	-1.49

Notes

1135 start purge@250mL/min; 1205 all parameters stable; 1210 sampled@250mL/min. Sunny 70F, light wind, smoky air

Grab Samples

GWC-17
Sampled at 1210; .5gal, 1L, 250mL
DUP-1
Sampled at 1220; .5gal, 1L, 250mL

Product Name: Low-Flow System

Date: 2016-11-16 09:37:21

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 49 ft

Pump placement from TOC 39 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.20 ft
Screen Length 10 ft
Depth to Water 35.20 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4087077 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.8 in
Total Volume Pumped 14.75 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			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:14:18	2099.93	18.88	6.52	154.39	0.78	35.60	2.18	70.72
Last 5	09:19:18	2399.93	18.91	6.52	151.24	0.42	35.60	2.27	71.91
Last 5	09:24:18	2699.93	18.92	6.51	148.91	0.47	35.60	2.44	72.90
Last 5	09:29:18	2999.93	19.00	6.51	147.23	0.44	35.60	2.52	73.88
Last 5	09:34:18	3299.93	19.04	6.51	146.99	0.49	35.60	2.58	74.99
Variance 0			0.01	-0.01	-2.33			0.17	0.98
Variance 1			0.07	-0.00	-1.69			0.08	0.99
Variance 2			0.04	0.00	-0.24			0.06	1.11

Notes

Purging to 3 wv
Started purge at 0835. Sample rate 250mL/min. Clear, no odor. Sunny, 56.

Grab Samples

GWC-18
Sample time 0939

Product Name: Low-Flow System

Date: 2016-11-15 16:41:07

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 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.21 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.5291935 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.36 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 50
Last 5	16:18:35	1500.97	19.49	5.65	79.98	--	--	3.87	102.44
Last 5	16:23:35	1800.97	19.43	5.66	80.02	0.36	29.49	3.79	100.08
Last 5	16:28:35	2100.97	19.50	5.66	80.53	0.29	29.49	4.12	99.39
Last 5	16:33:35	2400.97	19.50	5.66	80.32	0.30	29.49	4.07	97.87
Last 5	16:38:35	2700.94	19.33	5.66	80.36	0.24	29.49	4.09	96.85
Variance 0			0.08	0.01	0.51			0.33	-0.69
Variance 1			-0.00	-0.01	-0.21			-0.05	-1.52
Variance 2			-0.18	0.00	0.03			0.02	-1.02

Notes

3 well volumes since water level was below top of screen. Purge rate lowered to 0.2L/min after 3 well volumes. Weather is sunny. Sample taken at 1645.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-15 16:43:06

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF4
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 35.13 ft

Pump placement from TOC 25.13 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.13 ft
Screen Length 10 ft
Depth to Water 22.52 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2468001 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 15 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	16:19:54	1800.02	20.06	4.96	46.82	0.58	22.62	4.41	84.65
Last 5	16:24:54	2100.02	19.99	4.97	46.98	0.61	22.62	5.17	84.66
Last 5	16:29:54	2400.02	19.86	4.96	46.81	0.83	22.59	5.18	83.40
Last 5	16:34:54	2699.86	19.75	4.96	46.94	0.77	22.59	5.08	82.64
Last 5	16:39:54	2999.86	19.65	4.97	46.67	0.29	22.59	5.45	82.61
Variance 0			-0.13	-0.01	-0.16			0.01	-1.26
Variance 1			-0.11	-0.00	0.13			-0.10	-0.76
Variance 2			-0.11	0.01	-0.27			0.37	-0.04

Notes

Weather: 69•F Sunny

Grab Samples

GWC-20
Sample Time 1645

Product Name: Low-Flow System

Date: 2016-11-15 15:36:51

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 33 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 27.16 ft
Screen Length 10 ft
Depth to Water 20.38 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 28 in
Total Volume Pumped 16.25 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	15:05:24	1500.02	21.17	5.02	39.70	27.50	21.76	5.28	102.44
Last 5	15:10:24	1800.02	21.11	5.02	39.43	9.63	21.60	5.16	101.39
Last 5	15:15:24	2100.03	21.06	5.01	39.38	4.88	21.52	5.16	103.36
Last 5	15:20:24	2400.02	21.06	5.01	39.01	3.08	21.50	5.21	102.11
Last 5	15:25:24	2699.92	21.10	5.01	38.98	1.87	21.48	5.28	101.79
Variance 0			-0.05	-0.00	-0.04			0.00	1.96
Variance 1			0.00	-0.01	-0.38			0.05	-1.24
Variance 2			0.04	0.00	-0.03			0.08	-0.32

Notes

1430 start purge@400mL/min; 1433 mistakenly stopped SmarTroll; 1440 restart SmarTroll; 1500 decrease purge rate to 250mL/min; 1525 all parameters stable; 1530 sampled@250mL/min. Sunny 71F, light wind.

Grab Samples

GWC-21
Sampled at 1530; .5gal, 1L, 250mL

Product Name: Low-Flow System

Date: 2016-11-15 14:12:51

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-LF4
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 40 ft

Pump placement from TOC 29 ft

Well Information:

Well ID GWC-22
Well diameter 2 in
Well Total Depth 31.65 ft
Screen Length 10 ft
Depth to Water 26.99 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 26 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	13:45:35	900.02	20.87	6.37	219.13	0.77	28.12	1.55	41.33
Last 5	13:50:35	1200.02	20.97	6.44	240.94	1.63	28.40	1.15	35.97
Last 5	13:55:36	1501.02	20.93	6.45	254.08	2.60	28.74	0.71	30.47
Last 5	14:00:36	1801.02	20.89	6.41	271.25	0.00	29.18	0.46	7.05
Last 5	14:05:36	2100.88	21.82	6.47	282.57	--	--	4.38	-10.54
Variance 0			-0.05	0.01	13.14			-0.44	-5.50
Variance 1			-0.04	-0.04	17.18			-0.26	-23.42
Variance 2			0.94	0.06	11.32			3.92	-17.59

Notes

1325 start purge@200mL/min; 1350 increase purge rate to 250mL/min; 1400 last reading, water level falls below pump range, unable to collect water for turbidity.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-16 09:01:09

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 37 ft

Pump placement from TOC 29 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.7 ft
Screen Length 10 ft
Depth to Water 28.2 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.515004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 24.48 in
Total Volume Pumped 15.5 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	08:36:16	1199.97	18.01	6.16	131.23	--	--	0.40	-38.93
Last 5	08:41:16	1499.97	18.01	6.17	127.17	2.55	30.36	0.41	-36.80
Last 5	08:46:16	1799.97	17.29	6.15	126.51	1.49	30.25	0.28	-32.08
Last 5	08:51:16	2099.97	17.32	6.17	130.36	1.60	30.24	0.32	-36.35
Last 5	08:56:16	2399.97	17.41	6.18	128.46	1.27	30.24	0.28	-35.93
Variance 0			-0.72	-0.02	-0.65			-0.13	4.72
Variance 1			0.03	0.02	3.84			0.04	-4.27
Variance 2			0.10	0.01	-1.90			-0.04	0.42

Notes

3 well volumes purged since water level was below top of screen. Tubing chased down with water level. Purge rate lowered to 0.2 L/min after 3 well volumes. Weather is sunny. Temperature is 48F. Sample at 0905.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-12 09:10:08

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 32 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 14.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4413548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.64 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:47:13	900.02	18.61	5.32	69.27	1.59	14.60	3.06	157.48
Last 5	08:52:13	1200.03	18.61	5.30	66.41	1.16	14.60	3.23	157.34
Last 5	08:57:13	1500.03	18.70	5.28	64.20	1.01	14.60	3.35	157.78
Last 5	09:02:13	1800.02	18.66	5.27	62.05	1.08	14.60	3.46	157.82
Last 5	09:07:13	2100.02	18.80	5.27	61.51	0.98	14.60	3.51	157.49
Variance 0			0.08	-0.02	-2.21			0.12	0.44
Variance 1			-0.04	-0.01	-2.16			0.11	0.04
Variance 2			0.14	0.00	-0.53			0.05	-0.33

Notes

Sample taken at 0912 at 0.2L/min. Weather sunny.

Grab Samples

Well ID: GWA-3
 Log: LF 4- 1 of 15
 Report Created: 2017-02-02 15:10:16
 Site: LF 4
 GPS:
 Log Created: 2017-01-10 09:45:49
 Number Readings: 12
 Battery Type: SmarTROLLâ„¸ Battery Pack
 Battery SN: 448875
 Device Type: SmarTROLLâ„¸ MP
 Device SN: 449102

Created	Baro (mbar)	Temp (C)	RDO (mg/L)	RDO Sat (%)	pH (pH)	ORP (mV)	Act Cond (ÂµS/cm)	Sp Cond (ÂµS/cm)	Salinity (psu)	Resist (Ohm-cm)	Density (g/cm^3)	TDS (ppt)	Depth (ft)	Pressure (psi)	Air Temp (C)
1/10/2017 9:45	1033.7	14.94	7.02	68.1	4.89	276.3	22.4	27.8	0	44591	0.999	0	0.27	0.117	6.8
1/10/2017 9:50	1033.5	16.07	7.65	76.1	4.4	291.6	23.1	27.8	0	43338	0.999	0	0.28	0.121	9.3
1/10/2017 9:55	1033.6	15.85	7.51	74.3	4.32	296.9	22.1	26.8	0	45286	0.999	0	0.24	0.105	12.9
1/10/2017 10:00	1033.6	15.42	7.55	74.1	4.28	298.6	21.9	26.8	0	45684	0.999	0	0.23	0.101	11.5
1/10/2017 10:05	1033.5	15.48	7.42	72.8	4.26	299	21.8	26.6	0	45921	0.999	0	0.22	0.096	11.3
1/10/2017 10:10	1033.5	15.21	7.4	72.3	4.24	298.9	21.6	26.6	0	46291	0.999	0	0.23	0.099	10.9
1/10/2017 10:15	1033.3	15.3	6.7	65.6	4.24	300.2	21.8	26.7	0	45933	0.999	0	0.2	0.087	11.5
1/10/2017 10:20	1033.3	15.3	7.45	72.9	4.24	299.8	22	27	0	45447	0.999	0	0.18	0.076	15
1/10/2017 10:25	1033	15.98	7.01	69.6	4.21	303.9	22.5	27.3	0	44379	0.999	0	0.2	0.086	19.2
1/10/2017 10:30	1033	16.04	6.87	68.3	4.23	299.4	22.4	27	0	44664	0.999	0	0.18	0.078	17.8
1/10/2017 10:35	1032.9	16.42	6.8	68.2	4.24	299.4	22.6	27	0	44294	0.999	0	0.18	0.078	20
1/10/2017 10:40	1032.9	16.51	6.6	66.3	4.21	300.1	23.3	27.8	0	42990	0.999	0	0.19	0.083	20.2

Product Name: Low-Flow System

Date: 2017-01-10 13:22:12

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 32 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 16.21 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4413548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.08 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		+/- 0.2	+/- 10
Last 5	13:04:55	300.01	19.59	4.64	34.62	0.81	16.30	5.11	278.44
Last 5	13:09:55	599.94	19.68	4.63	34.67	0.43	16.30	5.02	277.54
Last 5	13:14:55	899.94	19.77	4.63	35.07	0.47	16.30	5.02	277.82
Last 5	13:19:55	1199.94	19.79	4.59	34.42	0.45	16.30	4.95	278.22
Last 5									
Variance 0			0.09	-0.01	0.04			-0.09	-0.90
Variance 1			0.09	-0.00	0.40			0.00	0.28
Variance 2			0.02	-0.03	-0.65			-0.07	0.40

Notes

Well sampled at 1423. Weather sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-10 15:45:19

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 42 ft

Pump placement from TOC 34 ft

Well Information:

Well ID GWA-4R
Well diameter 2 in
Well Total Depth 39 ft
Screen Length 10 ft
Depth to Water 25.1 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4886532 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.92 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:22:34	1499.88	20.32	5.46	49.02	0.62	25.51	1.17	-92.46
Last 5	15:27:34	1799.88	20.33	5.44	48.55	0.52	25.51	0.45	-91.59
Last 5	15:32:34	2099.87	20.43	5.44	47.62	0.52	25.51	0.37	-92.57
Last 5	15:37:34	2399.88	20.25	5.44	45.58	0.55	25.51	0.41	-90.87
Last 5	15:42:34	2699.88	19.86	5.44	45.45	0.64	25.51	0.47	-89.94
Variance 0			0.10	0.00	-0.93			-0.08	-0.99
Variance 1			-0.18	-0.01	-2.03			0.04	1.71
Variance 2			-0.39	0.01	-0.13			0.06	0.93

Notes

Sample at 1548. Weather sunny

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-11 09:50:37

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 44 ft

Pump placement from TOC 36.5 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.5 ft
Screen Length 10 ft
Depth to Water 24.11 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4981129 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.88 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:27:49	1500.03	20.21	5.56	35.86	0.60	24.35	7.22	172.36
Last 5	09:32:49	1800.03	20.37	5.58	38.36	0.60	24.35	7.22	169.93
Last 5	09:37:49	2100.03	20.57	5.56	35.72	0.39	24.35	7.30	173.48
Last 5	09:42:49	2400.03	20.66	5.56	36.04	0.29	24.35	7.21	169.93
Last 5	09:47:49	2700.03	20.61	5.56	36.81	0.44	24.35	7.09	169.62
Variance 0			0.20	-0.03	-2.64			0.08	3.55
Variance 1			0.09	0.01	0.32			-0.09	-3.54
Variance 2			-0.04	0.00	0.77			-0.12	-0.31

Notes

Sample at 0955 at 0.2L/min. Weather sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-13 10:50:38

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 28.7 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4524638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 26.25 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%	+/- 5		+/- 10%	+/- 10
Last 5	10:28:10	5099.91	19.85	5.31	42.57	4.82	28.75	8.84	173.84
Last 5	10:33:10	5399.91	20.44	5.25	42.75	5.67	28.75	8.89	179.48
Last 5	10:38:10	5699.91	20.62	5.24	42.93	4.56	28.75	8.77	178.08
Last 5	10:43:10	5999.83	20.67	5.28	42.74	4.32	28.75	8.82	176.39
Last 5	10:48:10	6299.83	20.70	5.28	42.73	4.17	28.75	8.90	177.55
Variance 0			0.18	-0.01	0.18			-0.11	-1.40
Variance 1			0.05	0.04	-0.18			0.05	-1.69
Variance 2			0.03	-0.00	-0.01			0.08	1.15

Notes

3 well volumes purged at 0.25L/min since initial depth to water was below top of screen. Sample taken at 1055 at 0.25 L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-12 12:46:06

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 36 ft

Pump placement from TOC 28.5 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 33.5 ft
Screen Length 10 ft
Depth to Water 24.4 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4602742 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:23:00	1499.91	21.29	6.32	171.39	1.00	24.45	5.16	124.20
Last 5	12:28:00	1799.91	21.34	6.24	157.66	--	--	5.12	126.74
Last 5	12:33:00	2099.92	21.31	6.27	161.25	0.62	24.45	4.79	126.80
Last 5	12:38:00	2399.91	21.60	6.26	158.19	0.38	24.45	4.79	125.22
Last 5	12:43:00	2699.91	21.61	6.23	158.44	0.68	24.45	4.86	127.07
Variance 0			-0.04	0.03	3.59			-0.33	0.06
Variance 1			0.29	-0.01	-3.06			0.00	-1.58
Variance 2			0.01	-0.03	0.26			0.07	1.86

Notes

3 well volumes purged due to initial water level being below top of screen. Purge rate lowered to 0.25 L/min after 3rd well volume. Sample taken at 1248 at 0.25L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-12 13:37:49

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model Hannah HI98703

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 47.5 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.50 ft
Screen Length 10 ft
Depth to Water 32.91 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4770126 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 23.05 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	13:11:37	4503.00	21.02	6.30	100.08	1.35	32.70	3.80	127.28
Last 5	13:16:36	4802.94	21.11	6.29	99.75	1.20	32.70	3.61	126.53
Last 5	13:21:36	5102.94	21.10	6.26	98.87	1.01	32.70	3.61	126.74
Last 5	13:26:36	5402.94	21.15	6.27	98.87	1.01	32.70	3.64	126.43
Last 5	13:31:36	5702.94	21.26	6.26	98.02	1.03	32.70	3.70	125.49
Variance 0			-0.00	-0.03	-0.87			-0.00	0.21
Variance 1			0.05	0.01	-0.00			0.03	-0.31
Variance 2			0.11	-0.02	-0.85			0.06	-0.94

Notes

Weather: 75F Sunny. Purge time: 1150/1330. Purged 3 well volumes - water level within 1ft of top of screen. Dup-2 taken. Drawdown = -2.52 in.

Grab Samples

GWC-11
Sample Time 1335
Dup-2
Qa/qc

Product Name: Low-Flow System

Date: 2017-01-12 10:33:31

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 44 ft

Pump placement from TOC 36 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.3 ft
Screen Length 10 ft
Depth to Water 26.58 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4981129 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.88 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	10:16:19	300.09	20.21	5.17	23.24	0.78	26.81	6.48	181.49
Last 5	10:21:19	600.03	20.74	5.14	24.12	0.98	26.82	6.48	179.22
Last 5	10:26:19	900.02	21.02	5.13	24.41	0.54	26.82	6.32	178.42
Last 5	10:31:19	1200.06	21.20	5.13	24.11	0.58	26.82	6.32	177.70
Last 5									
Variance 0			0.53	-0.04	0.87			0.00	-2.26
Variance 1			0.28	-0.01	0.29			-0.16	-0.80
Variance 2			0.18	0.00	-0.30			0.00	-0.73

Notes

Sample at 1035 at 0.2L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-12 09:39:59

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45.11 ft

Pump placement from TOC 35.11 ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.291345 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.48 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	09:16:23	300.03	16.74	6.32	22.15	11.30	24.42	8.29	121.76
Last 5	09:21:23	600.02	18.00	5.23	21.19	7.49	24.42	8.03	127.97
Last 5	09:26:23	900.02	18.31	5.20	22.11	4.43	24.42	7.93	133.99
Last 5	09:31:23	1200.02	18.38	5.19	22.59	2.79	24.42	7.93	138.89
Last 5	09:36:23	1500.02	18.40	5.19	22.78	2.57	24.42	7.85	142.05
Variance 0			0.30	-0.02	0.92			-0.11	6.03
Variance 1			0.07	-0.01	0.48			0.01	4.90
Variance 2			0.01	-0.00	0.19			-0.09	3.15

Notes

Weather: 49F Sunny. Purge time: 0910/0935. Sample rate: 0.2L/min

Grab Samples

GWA-13
Sample Time 0940

Product Name: Low-Flow System

Date: 2017-01-11 11:22:13

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 53 ft

Pump placement from TOC 45 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49.9 ft
Screen Length 10 ft
Depth to Water 24.56 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5406814 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.72 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	11:04:06	300.10	20.17	5.27	27.67	0.29	25.56	7.63	169.05
Last 5	11:09:06	600.02	20.04	5.30	28.65	0.54	25.58	7.44	164.40
Last 5	11:14:06	900.02	20.28	5.30	28.87	0.34	25.62	7.35	163.93
Last 5	11:19:06	1200.02	20.26	5.32	28.88	0.61	25.62	7.33	163.01
Last 5									
Variance 0			-0.13	0.02	0.97			-0.19	-4.65
Variance 1			0.24	0.01	0.23			-0.09	-0.47
Variance 2			-0.02	0.02	0.00			-0.01	-0.92

Notes

Sample at 1125 at 0.2 L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-11 12:50:03

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.3 ft
Screen Length 10 ft
Depth to Water 20.3 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.493383 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.36 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	12:32:10	300.07	21.77	5.00	24.78	1.67	20.58	7.73	182.08
Last 5	12:37:10	600.02	21.63	5.00	24.65	0.96	20.58	7.90	181.13
Last 5	12:42:10	900.02	21.60	5.00	24.67	0.92	20.58	7.82	176.22
Last 5	12:47:10	1200.02	21.56	5.00	24.65	0.61	20.58	7.71	175.73
Last 5									
Variance 0			-0.14	-0.00	-0.13			0.17	-0.94
Variance 1			-0.04	0.00	0.01			-0.08	-4.92
Variance 2			-0.04	-0.00	-0.02			-0.12	-0.49

Notes

Sample taken at 1255 at 0.2L/min. Extra radium sample taken. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-11 14:45:25

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 22.9 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.493383 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.4 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	14:27:14	300.07	22.00	5.04	22.38	0.46	23.30	7.71	187.11
Last 5	14:32:14	600.03	21.75	5.05	22.30	0.60	23.34	7.88	180.13
Last 5	14:37:14	900.02	21.77	5.06	22.13	0.92	23.35	7.62	177.47
Last 5	14:42:14	1200.02	21.75	5.07	21.97	0.63	23.35	8.02	176.11
Last 5									
Variance 0			-0.25	0.01	-0.08			0.18	-6.98
Variance 1			0.02	0.00	-0.17			-0.26	-2.66
Variance 2			-0.03	0.01	-0.16			0.40	-1.36

Notes

Sample taken at 1445 at 0.2L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-11 16:16:45

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 10 ft
Depth to Water 26.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.493383 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:59:01	300.09	21.28	5.23	32.35	0.58	26.65	5.79	165.95
Last 5	16:04:01	600.02	21.01	5.23	32.14	0.75	26.66	6.12	160.84
Last 5	16:09:01	900.02	20.97	5.22	32.41	0.55	26.67	6.04	158.35
Last 5	16:14:01	1200.02	20.84	5.23	32.51	0.47	26.67	5.97	156.63
Last 5									
Variance 0			-0.27	-0.00	-0.21			0.33	-5.11
Variance 1			-0.04	-0.01	0.27			-0.08	-2.49
Variance 2			-0.13	0.00	0.10			-0.06	-1.72

Notes

Take sample at 1620 at 0.2L/min. Weather sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-11 17:21:48

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model Hannah HI98703

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.25 in
Tubing Length 47.20 ft

Pump placement from TOC 37.20 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.20 ft
Screen Length 10 ft
Depth to Water 35.27 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5456089 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.36 in
Total Volume Pumped 12.5 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	16:52:42	3899.98	19.98	6.52	143.56	4.58	35.55	5.48	137.17
Last 5	16:57:42	4199.98	19.68	6.52	142.97	4.20	35.55	5.12	134.52
Last 5	17:02:42	4499.98	19.59	6.43	143.87	3.63	35.55	4.39	134.27
Last 5	17:07:42	4799.98	19.51	6.41	143.64	3.31	35.55	4.25	131.45
Last 5	17:12:42	5099.98	19.42	6.43	143.47	3.13	35.55	4.30	130.44
Variance 0			-0.09	-0.09	0.91			-0.73	-0.25
Variance 1			-0.09	-0.02	-0.23			-0.14	-2.82
Variance 2			-0.08	0.01	-0.17			0.05	-1.01

Notes

Weather: 67F Sunny. Purge time: 1545/1710. Sample time: 1715. Purge rate: 0.15/0.2/0.1/0.15.

Grab Samples

GWC-18
1715

Product Name: Low-Flow System

Date: 2017-01-16 15:41:31

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
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 0.25 in
Tubing Length 41.95 ft

Pump placement from TOC 31.95 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.40 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.6699321 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.4 in
Total Volume Pumped 29.75 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:18:11	5698.85	19.98	5.65	86.15	6.01	29.60	3.41	84.16
Last 5	15:23:11	5998.81	19.99	5.66	86.24	5.19	29.60	3.41	83.26
Last 5	15:28:11	6298.72	20.04	5.65	86.38	4.36	29.60	3.41	83.77
Last 5	15:33:11	6598.72	20.03	5.66	86.48	3.99	29.60	3.40	82.76
Last 5	15:38:11	6898.72	20.05	5.65	86.62	3.71	29.60	3.41	83.27
Variance 0			0.05	-0.02	0.14			-0.00	0.51
Variance 1			-0.01	0.02	0.10			-0.01	-1.01
Variance 2			0.02	-0.01	0.14			0.01	0.51

Notes

Starting water level below top of screen. Purging 3 well volumes

Weather: 71F partly cloudy. Purge time : 1340/1535. Purged 3well volumes because water level in screen area. Adjusted purge rate to reduce

Grab Samples

GWC-19
Sample Time 1540

Product Name: Low-Flow System

Date: 2017-01-13 09:33:54

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model Hannah HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35.13 ft

Pump placement from TOC 25.13 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.13 ft
Screen Length 10 ft
Depth to Water 22.78 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2468001 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.96 in
Total Volume Pumped 17.75 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			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:10:07	2100.00	20.17	4.94	45.91	0.41	22.92	6.04	158.41
Last 5	09:15:07	2400.00	20.24	4.96	46.04	0.32	22.92	5.79	163.22
Last 5	09:20:07	2700.00	20.05	4.95	45.70	0.25	22.86	5.42	168.80
Last 5	09:25:07	3000.00	20.08	4.97	45.52	0.74	22.86	5.11	173.86
Last 5	09:30:07	3300.00	20.20	4.97	45.35	0.35	22.86	5.36	181.19
Variance 0			-0.19	-0.01	-0.34			-0.38	5.59
Variance 1			0.03	0.02	-0.18			-0.30	5.06
Variance 2			0.12	-0.00	-0.17			0.25	7.32

Notes

Purging 3 well volumes - starting water level is within screen.
Weather: 56F Sunny. Purge time: 0835/0930. Purged 3well volumes.

Grab Samples

GWC-20
Sample Time 0935

Product Name: Low-Flow System

Date: 2017-01-12 14:55:21

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 30 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 27.16 ft
Screen Length 10 ft
Depth to Water 20.75 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.4318951 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 9.36 in
Total Volume Pumped 18.25 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%	+/- 5		+/- 10%	+/- 10
Last 5	14:35:21	1680.96	21.99	5.03	37.56	1.57	21.56	5.50	168.44
Last 5	14:39:21	1920.95	22.03	5.02	37.71	0.76	21.55	5.56	169.31
Last 5	14:43:21	2160.95	22.04	4.99	37.39	0.81	21.55	6.39	170.27
Last 5	14:47:21	2400.95	21.96	5.01	37.30	0.79	21.53	5.84	170.47
Last 5	14:51:21	2640.95	22.13	4.99	37.26	0.46	21.53	6.12	175.03
Variance 0			0.01	-0.03	-0.32			0.83	0.96
Variance 1			-0.08	0.02	-0.10			-0.55	0.20
Variance 2			0.18	-0.02	-0.04			0.28	4.56

Notes

3 well volumes purged since initial depth to water was below top of screen. Purge rate lowered to 0.25L/min after 3rd well volume. Sample taken at 1500 at 0.25 L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-17 10:40:28

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 4
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 0.25 in
Tubing Length 38.70 ft

Pump placement from TOC 28.70 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.70 ft
Screen Length 10 ft
Depth to Water 28.38 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.6385607 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19.44 in
Total Volume Pumped 18.5 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	10:13:55	4799.93	19.59	5.71	67.00	1.08	30.00	1.78	69.54
Last 5	10:18:55	5099.93	19.64	5.70	66.57	0.88	30.00	1.90	70.72
Last 5	10:23:55	5399.93	19.68	5.66	65.49	0.85	30.00	2.01	72.31
Last 5	10:28:55	5699.93	19.73	5.68	64.65	0.72	30.00	2.12	75.50
Last 5	10:33:55	5999.93	19.73	5.68	64.37	0.70	30.00	2.19	75.96
Variance 0			0.04	-0.05	-1.08			0.11	1.59
Variance 1			0.05	0.02	-0.83			0.11	3.19
Variance 2			0.00	-0.00	-0.28			0.07	0.46

Notes

Purging 3 well volumes. Water level is within screen area.

Purged 3 well volumes. Weather: 58F cloudy. Purge time: 0853/1033. Adjusted flow rate and intake depth for drawdown. Final intake depth is 30.50 ft btoc.

Grab Samples
GEC-23
Sample Time 1035

Product Name: Low-Flow System

Date: 2017-02-28 10:04:26

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 35 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.50 ft
Screen Length 10 ft
Depth to Water 16.43 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4962198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 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	09:42:19	600.03	20.06	5.01	42.55	3.54	16.53	4.62	128.92
Last 5	09:47:18	899.99	19.99	4.99	41.65	2.66	16.53	4.53	122.40
Last 5	09:52:18	1199.99	19.99	4.97	40.99	1.81	16.53	4.46	119.48
Last 5	09:57:18	1499.99	19.97	4.93	41.07	1.07	16.53	4.44	120.47
Last 5	10:02:18	1799.99	20.04	4.91	40.28	1.00	16.53	4.40	118.83
Variance 0			-0.00	-0.02	-0.66			-0.07	-2.91
Variance 1			-0.02	-0.03	0.08			-0.02	0.98
Variance 2			0.07	-0.02	-0.79			-0.04	-1.64

Notes

Started purging at 0933 at 200mL/min
Stopped purging at 1003 at 200mL/min

Grab Samples

GWA-2
Grabbed Sample at 1010 at 200mL/min

Product Name: Low-Flow System

Date: 2017-02-28 10:40:11

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 48 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 38.5 ft
Screen Length 10 ft
Depth to Water 18.99 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3042443 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 66 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			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	10:00:43	900.02	20.89	4.94	35.64	0.89	23.23	6.34	159.01
Last 5	10:05:43	1200.02	20.93	4.96	35.14	0.33	23.81	6.34	168.04
Last 5	10:10:43	1500.02	21.06	4.99	34.90	0.36	24.27	6.44	177.70
Last 5	10:15:43	1800.01	21.13	5.02	34.60	1.41	24.46	6.40	179.71
Last 5	10:20:43	2100.00	21.13	4.95	35.41	1.51	24.47	6.28	187.36
Variance 0			0.13	0.03	-0.24			0.10	9.66
Variance 1			0.08	0.03	-0.29			-0.03	2.01
Variance 2			0.00	-0.07	0.80			-0.12	7.65

Notes

0945 start purge at 250mL/min; 1000 reduce purge rate to 200mL/min; 1010 reduce purge rate to 100mL/min; 1020 all parameters stable; 1025 sampled at 100mL/min. 71F Overcast and calm

Grab Samples

GWA-3
Sampled at 1025

Product Name: Low-Flow System

Date: 2017-02-28 12:16:47

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristalic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 37 ft

Well Information:

Well ID GWA-4R
Well diameter 2 in
Well Total Depth 39.00 ft
Screen Length 10 ft
Depth to Water 25.20 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.92 in
Total Volume Pumped 10.5 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	11:52:51	2099.97	22.52	5.51	49.49	2.82	25.64	0.19	32.08
Last 5	11:57:51	2399.96	22.80	5.49	47.56	2.60	25.64	0.22	33.56
Last 5	12:02:51	2699.96	23.00	5.47	45.60	2.68	25.64	0.27	35.71
Last 5	12:07:51	2999.96	22.94	5.48	45.91	2.52	25.61	0.32	37.18
Last 5	12:12:51	3299.96	23.05	5.49	46.67	2.66	25.61	0.37	38.17
Variance 0			0.20	-0.02	-1.96			0.04	2.15
Variance 1			-0.07	0.01	0.31			0.05	1.47
Variance 2			0.12	0.00	0.76			0.05	0.99

Notes

Started purging at 200mL/min at 1117
Stopped purging at 1212 at 150mL/min lowered purge rate due to Spec. Cond. dropping out of tolerance

Grab Samples

GWA-4R
Grabbed Sample at 1220 at 150mL/min

Product Name: Low-Flow System

Date: 2017-02-28 12:19:58

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 50 ft

Pump placement from TOC 36.5 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.5 ft
Screen Length 10 ft
Depth to Water 24.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 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	11:45:10	300.09	25.06	5.36	41.38	0.58	24.30	6.12	208.66
Last 5	11:50:10	600.02	22.01	5.49	43.65	0.51	24.40	6.05	199.24
Last 5	11:55:10	900.02	21.73	5.55	42.85	0.34	24.40	6.24	194.69
Last 5	12:00:10	1200.02	21.91	5.53	42.11	0.34	24.40	6.34	195.04
Last 5	12:05:11	1501.00	22.07	5.53	41.53	0.67	24.40	6.35	196.09
Variance 0			-0.28	0.06	-0.80			0.19	-4.55
Variance 1			0.18	-0.01	-0.74			0.10	0.35
Variance 2			0.16	-0.01	-0.58			0.01	1.04

Notes

1140 start purge at 250mL/min; 1205 all parameters stable; 1210 sampled at 250mL/min. 78F Partly Cloudy, light wind.

Grab Samples

GWA-5
Sampled at 1210

Product Name: Low-Flow System

Date: 2017-02-28 14:02:32

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 50 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.32 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 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	13:25:04	600.02	22.40	5.00	23.13	2.03	24.35	6.55	228.81
Last 5	13:30:04	900.02	22.82	4.87	24.68	4.04	24.35	6.32	232.26
Last 5	13:35:04	1200.02	22.82	4.87	24.37	1.02	24.35	6.23	235.35
Last 5	13:40:04	1500.02	22.72	4.88	25.41	0.71	24.35	6.09	233.15
Last 5	13:45:04	1800.02	22.71	4.86	25.55	0.51	24.35	6.21	233.68
Variance 0			0.01	0.00	-0.30			-0.09	3.09
Variance 1			-0.11	0.01	1.04			-0.14	-2.20
Variance 2			-0.00	-0.01	0.14			0.12	0.53

Notes

1315 start purge at 250mL/min; 1345 all parameters stable; 1350 sampled at 250mL/min. 82F Partly Cloudy, light wind.

Grab Samples

GWA-13
Sampled at 1350

Product Name: Low-Flow System

Date: 2017-02-28 13:48:52

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristalic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 54 ft

Pump placement from TOC 44 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49.90 ft
Screen Length 10 ft
Depth to Water 24.50 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5810248 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.28 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	13:25:38	300.04	22.45	5.35	28.65	8.24	25.39	5.81	114.48
Last 5	13:30:38	599.98	22.22	5.33	28.72	4.01	25.42	5.87	107.89
Last 5	13:35:38	899.97	22.35	5.34	28.40	2.60	25.43	5.85	104.24
Last 5	13:40:38	1199.97	22.13	5.33	28.47	1.97	25.43	5.87	101.79
Last 5	13:45:38	1499.97	22.09	5.32	28.45	1.39	25.44	5.92	100.60
Variance 0			0.13	0.00	-0.32			-0.02	-3.66
Variance 1			-0.22	-0.01	0.08			0.02	-2.44
Variance 2			-0.04	-0.01	-0.02			0.05	-1.19

Notes

Started purging at 200mL/min at 1320
Stopped purging at 1345 @200mL/min will take dup-1 from this well

Grab Samples

GWA-14
Grabbed Sample at 1355 at 200mL/min

Product Name: Low-Flow System

Date: 2017-02-28 14:01:32

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.3 ft
Screen Length 10 ft
Depth to Water 20.02 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5319272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.28 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		+/- 0.2	+/- 100
Last 5	13:44:46	299.73	23.30	5.11	22.61	2.75	20.20	6.63	13.15
Last 5	13:49:46	599.67	22.84	5.10	22.63	3.26	20.20	6.60	15.83
Last 5	13:54:46	899.67	22.94	5.10	22.83	2.22	20.21	6.60	17.42
Last 5	13:59:46	1199.67	22.94	5.10	22.71	0.94	20.21	6.57	19.70
Last 5									
Variance 0			-0.46	-0.00	0.02			-0.02	2.68
Variance 1			0.11	-0.01	0.20			-0.01	1.59
Variance 2			-0.01	0.00	-0.13			-0.03	2.28

Notes

Begin purging at 1339. Well stable at 1359. Sample at 1405. Sample rate 0.2 L/min. Weather is sunny.

Grab Samples

GWA-15
1405

Product Name: Low-Flow System

Date: 2017-03-01 11:03:56

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 22.68 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5319272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.88 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		+/- 0.2	+/- 100
Last 5	10:46:26	300.08	22.81	5.05	22.73	1.31	22.90	6.97	68.43
Last 5	10:51:25	600.02	22.72	5.13	22.68	0.87	22.92	6.84	70.54
Last 5	10:56:25	900.02	22.84	5.14	22.62	0.29	22.92	6.84	73.80
Last 5	11:01:25	1200.02	22.91	5.14	22.60	0.14	22.92	6.74	76.47
Last 5									
Variance 0			-0.09	0.08	-0.05			-0.12	2.11
Variance 1			0.12	0.00	-0.05			0.00	3.26
Variance 2			0.07	0.01	-0.02			-0.11	2.67

Notes

Begin purging at 1041. Well stable at 1101. Sample at 1106. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

GWA-16
1106

Product Name: Low-Flow System

Date: 2017-03-01 09:12:10

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 31 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 14.44 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4783661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.8 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	08:53:47	300.03	19.37	5.34	68.35	1.55	14.58	3.01	70.87
Last 5	08:58:47	600.02	19.41	5.32	67.93	0.98	14.59	2.93	65.95
Last 5	09:03:47	900.02	19.41	5.31	67.61	0.77	14.59	2.92	65.20
Last 5	09:08:47	1200.02	19.41	5.31	66.93	1.08	14.59	2.95	63.60
Last 5									
Variance 0			0.04	-0.02	-0.42			-0.08	-4.92
Variance 1			-0.01	-0.01	-0.32			-0.01	-0.75
Variance 2			0.01	0.01	-0.68			0.02	-1.60

Notes

Begin purging at 0848. Well stable at 0908. Sample at 0915. Sample rate 0.2L/min. DUP-2 taken. Weather is sunny.

Grab Samples

GWC-1
0915

DUP-2
0915

Product Name: Low-Flow System

Date: 2017-03-01 14:59:07

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 43 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 37.58 ft
Screen Length 10 ft
Depth to Water 28.98 ft

Pumping Information:

Final Pumping Rate 0.5 mL/min
Total System Volume 0.5319272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 73.5 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	14:35:12	2400.03	22.57	4.81	51.67	--	--	7.86	116.15
Last 5	14:40:12	2700.03	22.62	4.81	51.30	0.14	28.35	7.73	115.57
Last 5	14:45:12	2999.97	23.88	4.81	51.65	0.44	28.33	7.74	116.22
Last 5	14:50:12	3299.97	23.89	4.81	51.20	0.11	28.33	7.73	116.17
Last 5	14:55:14	3601.97	24.05	4.81	51.19	0.10	28.33	8.03	116.10
Variance 0			1.26	-0.00	0.35			0.01	0.65
Variance 1			0.02	-0.00	-0.45			-0.01	-0.05
Variance 2			0.16	0.00	-0.02			0.30	-0.07

Notes

Started purging at 1355 at .5ML/min (3well volumes were Necessary)
Stopped purging at 1455 at 250mL/min

Grab Samples

GWC-9
Grabbed Sample at 1500 at 250mL/min

Product Name: Low-Flow System

Date: 2017-03-01 12:25:23

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 38 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 33.50 ft
Screen Length 10 ft
Depth to Water 24.17 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5096101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 5%		+/- 0.2	+/- 10
Last 5	12:01:23	4199.98	22.36	6.19	170.74	0.01	24.22	4.66	78.35
Last 5	12:06:23	4499.98	22.44	6.18	169.20	0.01	24.22	5.47	77.37
Last 5	12:11:23	4799.97	22.40	6.18	169.73	0.07	24.22	4.68	77.14
Last 5	12:16:23	5099.98	22.26	6.16	166.36	0.06	24.22	4.86	76.76
Last 5	12:21:23	5399.97	22.18	6.15	164.58	0.01	24.22	4.53	76.41
Variance 0			-0.05	-0.00	0.53			-0.78	-0.23
Variance 1			-0.13	-0.02	-3.37			0.17	-0.38
Variance 2			-0.09	-0.00	-1.78			-0.33	-0.35

Notes

Started purging at 200mL/min at 1051
Stopped purging at 1221 at 200mL/min DO took awhile to become stable, Parameter was up and down but finally stabilized

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-01 11:40:50

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 55 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.5 ft
Screen Length 10 ft
Depth to Water 32.7 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.7104883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 21.875 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	11:00:31	3007.02	21.68	6.41	124.34	0.65	32.76	2.73	76.52
Last 5	11:10:31	3606.98	21.92	6.36	118.91	0.69	32.75	2.75	82.93
Last 5	11:15:31	3906.98	22.03	6.33	116.88	1.25	32.75	2.78	87.21
Last 5	11:20:31	4206.98	22.14	6.32	114.17	1.08	32.75	2.83	89.51
Last 5	11:25:31	4506.98	22.63	6.41	0.00	--	--	8.09	55.08
Variance 0			0.11	-0.03	-2.03			0.03	4.28
Variance 1			0.11	-0.01	-2.71			0.05	2.31
Variance 2			0.49	0.09	-114.17			5.26	-34.43

Notes

1010 start purge at 375mL/min; 1030 1st well volume; 1045 2nd well volume, reduce purge rate to 250mL/min; 1120 All parameters stable. 1125 began sampling at 250mL/min *low-flow logged parameters at 1125 while pump was disconnected from flow cell. 80F Partly Cloudy and windy

Grab Samples

GWC-11
Sampled at 1125
GWC-11 2nd Rad
Sampled at 1125

Product Name: Low-Flow System

Date: 2017-03-01 09:45:07

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 45 ft

Pump placement from TOC 36 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.30 ft
Screen Length 10 ft
Depth to Water 25.16 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.96 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	+/- 3%	+/- 5%		+/- 0.2	+/- 10
Last 5	09:22:01	900.02	20.57	5.07	23.87	1.15	26.47	5.71	110.56
Last 5	09:27:01	1200.02	20.66	5.06	24.81	1.35	26.49	5.63	108.98
Last 5	09:32:01	1500.03	20.79	5.05	25.12	1.58	26.49	5.56	107.52
Last 5	09:37:01	1800.03	20.79	5.05	25.02	1.26	26.49	5.55	108.22
Last 5	09:42:01	2100.02	20.70	5.05	24.95	1.12	26.49	5.57	106.09
Variance 0			0.13	-0.00	0.30			-0.07	-1.46
Variance 1			0.00	-0.00	-0.09			-0.01	0.71
Variance 2			-0.09	0.00	-0.07			0.02	-2.14

Notes

Started purging at 200mL/min at 0907
Stopped purging at 0942 at 200mL/min

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-01 12:29:06

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 10 ft
Depth to Water 26.05 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5319272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.28 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		+/- 0.2	+/- 100
Last 5	12:10:38	300.09	23.81	5.29	36.04	0.30	26.24	4.88	133.36
Last 5	12:15:38	600.02	23.11	5.19	33.57	0.41	26.24	5.12	126.70
Last 5	12:20:38	900.02	22.70	5.28	34.75	0.54	26.24	4.93	124.71
Last 5	12:25:38	1200.02	22.76	5.25	33.82	0.87	26.25	5.22	119.43
Last 5									
Variance 0			-0.70	-0.09	-2.47			0.25	-6.67
Variance 1			-0.41	0.09	1.18			-0.20	-1.99
Variance 2			0.05	-0.03	-0.94			0.29	-5.28

Notes

Begin purging at 1205. Stable at 1225. Sample at 1235. Sample rate 0.2 L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-01 16:18:18

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 50 ft

Pump placement from TOC 37 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.20 ft
Screen Length 10 ft
Depth to Water 35.1 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 17.75 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			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	15:45:32	2099.99	20.47	6.44	156.60	--	--	3.04	130.61
Last 5	15:50:35	2402.99	20.35	6.45	155.01	2.14	35.80	3.33	130.24
Last 5	15:55:36	2703.99	20.93	6.47	160.06	1.86	35.63	2.80	129.96
Last 5	16:00:36	3003.99	20.97	6.48	158.81	1.55	35.58	2.67	129.65
Last 5	16:05:36	3303.99	21.06	6.48	159.02	--	--	2.63	128.94
Variance 0			0.58	0.02	5.05			-0.52	-0.28
Variance 1			0.04	0.01	-1.25			-0.14	-0.31
Variance 2			0.09	-0.00	0.21			-0.03	-0.71

Notes

1510 start purge at 350mL/min; 1550 3 well volumes purged, reduce purge rate to 250mL/min; 1605 all parameters stable; 1610 sampled at 250mL/min. 82F Partly Cloudy and windy. *1605: 1.41NTU; 35.58ft btoc

Grab Samples

GWC-18
Sampled at 1610

Product Name: Low-Flow System

Date: 2017-03-01 14:14:31

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 45 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.2 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 17.75 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			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	13:40:10	2100.02	20.93	5.58	98.13	--	--	4.49	152.57
Last 5	13:45:10	2400.02	20.80	5.63	98.31	6.78	29.43	4.51	152.73
Last 5	13:50:10	2700.02	21.06	5.62	98.45	4.79	29.39	3.31	153.35
Last 5	13:55:10	3000.02	21.20	5.62	98.85	4.59	29.38	3.24	154.64
Last 5	14:00:10	3300.02	21.24	5.62	98.51	4.97	29.38	3.24	155.02
Variance 0			0.27	-0.01	0.14			-1.20	0.62
Variance 1			0.13	-0.01	0.40			-0.06	1.28
Variance 2			0.05	0.00	-0.34			-0.01	0.38

Notes

1305 start purge at 375mL/min; 1345 reduce purge rate to 250mL/min; 1350 three well volumes purged; 1400 all parameters stable; 1405 sampled at 250mL/min. 84F Mostly Cloudy and windy.

Grab Samples

GWC-19
Sampled at 1405

Product Name: Low-Flow System

Date: 2017-03-01 14:12:15

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 32 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 27.16 ft
Screen Length 10 ft
Depth to Water 20.51 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4828295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15.36 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	13:47:39	1200.02	20.99	5.03	38.62	1.75	21.75	5.69	122.30
Last 5	13:52:39	1500.02	20.93	5.01	38.65	--	--	5.73	122.61
Last 5	13:57:39	1800.02	21.11	5.02	38.61	1.45	21.79	5.73	119.83
Last 5	14:02:39	2100.02	21.69	5.00	38.93	0.71	21.40	5.51	119.86
Last 5	14:07:39	2400.02	21.52	4.99	38.89	0.46	21.35	5.39	117.30
Variance 0			0.18	0.01	-0.04			-0.01	-2.78
Variance 1			0.58	-0.03	0.31			-0.22	0.03
Variance 2			-0.17	-0.00	-0.03			-0.12	-2.56

Notes

Begin purging at 1327. Purge 3 well volumes since depth to water was below top of screen. Purge well volumes at 0.45 L/min. Lower purge rate to 0.25L/min after 3rd well volume. Well stable at 1407. Sample at 1415. Sample rate 0.25L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-02 09:21:44

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 4
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 38 ft

Pump placement from TOC 30 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.7 ft
Screen Length 10 ft
Depth to Water 28.35 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5096101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20.4 in
Total Volume Pumped 12.5 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		+/- 10%	+/- 100
Last 5	08:57:24	1200.02	18.40	5.78	70.53	0.72	29.81	0.94	59.69
Last 5	09:02:24	1500.02	18.30	5.76	69.73	--	--	0.77	58.34
Last 5	09:07:24	1800.02	18.39	5.75	68.83	0.22	30.05	0.76	57.75
Last 5	09:12:24	2100.02	17.98	5.76	68.93	0.12	30.03	0.75	56.39
Last 5	09:17:24	2400.02	18.02	5.75	66.12	0.10	30.03	0.85	55.04
Variance 0			0.09	-0.02	-0.90			-0.01	-0.59
Variance 1			-0.41	0.02	0.10			-0.01	-1.36
Variance 2			0.05	-0.01	-2.81			0.10	-1.35

Notes

Begin purging at 0837. Purge 3 well volumes at 0.35L/min since depth to water was below top of screen. Lower purge rate to 0.2L/min after 3rd well volume at 0907. Pump intake depth lowered to 30.5ft at 0857. Well stable at 0917. Sample at 0925. Sample rate 0.2L/min. Weather is cloudy.

Grab Samples

GWC-23
0925

Product Name: Low-Flow System

Date: 2017-04-20 14:37:58

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 33.5 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 14.53 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2395247 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.16 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	14:14:12	600.02	20.95	5.24	71.04	1.09	14.71	2.75	147.50
Last 5	14:19:12	900.02	20.66	5.28	69.98	1.06	14.71	2.77	144.65
Last 5	14:24:12	1200.02	20.65	5.28	68.66	0.81	14.71	2.86	143.52
Last 5	14:29:12	1500.02	20.57	5.25	66.61	0.68	14.71	3.00	143.61
Last 5	14:34:12	1800.02	20.46	5.29	66.39	0.63	14.71	3.10	141.64
Variance 0			-0.01	-0.00	-1.32			0.09	-1.13
Variance 1			-0.08	-0.03	-2.05			0.14	0.09
Variance 2			-0.11	0.04	-0.22			0.10	-1.97

Notes

Purge started at 1404. Purge rate at 200 mL/min. Weather - partly cloudy and sunny 70 F.
Parameters stable at 1434. Well sampled at 1445. Sample rate at 200 mL/min. DUP-2 sample taken.

Grab Samples

GWC-1
Sampled at 1445
DUP-2
--

Product Name: Low-Flow System

Date: 2017-04-19 15:05:10

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF - 4
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 32 ft

Pump placement from TOC 23.5 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 16.28 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2413548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 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		+/- 0.2	+/- 100
Last 5	14:47:47	300.08	21.22	4.99	40.68	0.61	16.38	4.82	91.81
Last 5	14:52:46	600.01	20.77	5.00	40.23	1.44	16.38	4.70	102.35
Last 5	14:57:46	900.01	20.77	4.96	40.26	1.25	16.38	4.65	113.53
Last 5	15:02:46	1200.00	20.65	4.98	39.79	1.09	16.38	4.57	122.62
Last 5									
Variance 0			-0.45	0.01	-0.45			-0.11	10.54
Variance 1			0.00	-0.03	0.03			-0.06	11.18
Variance 2			-0.11	0.01	-0.47			-0.08	9.09

Notes

Begin purging at 1442. Well stable at 1502. Sample at 1510. Sample rate 0.2L/min. Weather is cloudy.

Grab Samples

GWA - 2
1510

Product Name: Low-Flow System

Date: 2017-04-19 15:29:16

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 43 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 38.50 ft
Screen Length 10 ft
Depth to Water 19.55 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19.92 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	14:58:09	600.03	22.09	5.04	29.42	0.21	21.01	6.24	82.31
Last 5	15:03:09	900.03	22.14	5.10	29.36	0.08	21.13	6.21	79.95
Last 5	15:08:09	1200.03	21.97	5.08	29.25	0.10	21.20	6.47	82.57
Last 5	15:13:09	1500.03	21.90	5.09	29.19	0.22	21.21	6.46	83.68
Last 5	15:18:09	1800.03	21.73	5.12	29.16	0.12	21.22	6.37	83.83
Variance 0			-0.17	-0.02	-0.11			0.26	2.62
Variance 1			-0.07	0.01	-0.05			-0.01	1.11
Variance 2			-0.16	0.03	-0.03			-0.09	0.15

Notes

Purge started at 14:48. Purge rate at 200 mL/min. Weather partly cloudy 76F.
Parameters stable at 1518. Well sampled at 1530. Sample rate 200ml/min.

Grab Samples

GWA-3
Sampled at 1530

Product Name: Low-Flow System

Date: 2017-04-20 10:21:16

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 44 ft

Pump placement from TOC 34 ft

Well Information:

Well ID GWA-4R
Well diameter 2 in
Well Total Depth 39 ft
Screen Length 10 ft
Depth to Water 25.32 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2863906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.32 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	09:57:03	900.02	22.01	5.56	63.90	0.15	25.68	0.23	68.56
Last 5	10:02:03	1200.02	22.58	5.51	61.42	0.17	25.68	0.22	67.84
Last 5	10:07:03	1500.02	22.73	5.52	56.98	0.11	25.69	0.20	64.36
Last 5	10:12:03	1800.02	22.89	5.54	55.82	0.17	25.68	0.20	63.01
Last 5	10:17:03	2100.02	23.03	5.51	56.03	0.37	25.68	0.20	63.29
Variance 0			0.16	0.01	-4.44			-0.01	-3.48
Variance 1			0.16	0.02	-1.16			-0.00	-1.35
Variance 2			0.13	-0.03	0.22			0.01	0.28

Notes

Purge started at 0942. Purge rate at 200 mL/ min. Weather - partly cloudy 70 F.
Parameters stable at 1017. Well sampled at 1025. Sample rate at 200 mL/min. Weather - sunny 70F.

Grab Samples

GWA-4R
Sampled at 1025

Product Name: Low-Flow System

Date: 2017-04-20 10:07:24

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF - 4
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 44 ft

Pump placement from TOC 36.5 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.5 ft
Screen Length 10 ft
Depth to Water 24.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2981128 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.28 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	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:45:14	300.15	20.57	5.66	22.79	1.35	24.49	6.85	90.47
Last 5	09:50:13	600.03	20.61	5.57	35.07	0.36	24.50	6.43	97.33
Last 5	09:55:13	900.02	20.93	5.60	37.42	1.49	24.50	6.17	107.71
Last 5	10:00:13	1200.03	21.01	5.58	36.17	0.67	24.50	6.14	117.53
Last 5	10:05:13	1500.03	21.32	5.63	37.25	0.52	24.50	6.12	126.05
Variance 0			0.32	0.04	2.35			-0.26	10.38
Variance 1			0.08	-0.02	-1.25			-0.03	9.82
Variance 2			0.31	0.05	1.08			-0.02	8.52

Notes

Begin purging at 0940. Well stable at 1005. Sample at 1010. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

GWA - 5
1010

Product Name: Low-Flow System

Date: 2017-04-24 16:45:50

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Bladder QED
Tubing Type Dual LDPE
Tubing Diameter 0.175 in
Tubing Length 45 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.50 ft
Screen Length 10 ft
Depth to Water 28.49 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.5528427 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	16:10:36	1500.01	21.27	4.97	52.26	4.27	28.52	8.01	139.00
Last 5	16:15:36	1800.00	21.29	4.97	52.22	2.66	28.52	8.06	140.73
Last 5	16:20:36	2099.99	21.35	4.97	52.38	1.96	28.52	8.09	141.09
Last 5	16:25:36	2399.99	21.37	4.96	52.52	4.23	28.50	8.10	142.99
Last 5	16:30:36	2700.00	21.30	4.99	52.49	1.87	28.50	8.06	142.89
Variance 0			0.05	-0.00	0.16			0.03	0.36
Variance 1			0.02	-0.01	0.14			0.01	1.90
Variance 2			-0.07	0.03	-0.03			-0.04	-0.10

Notes

1545 start purge at 500mL/min; 1620 reduce purge rate to 250mL/min; 1630 3 well volumes purged, all parameters stable; 1635 sampled at 250mL/min. 76F Partly cloudy and windy.

Grab Samples

GWC-9
Sampled at 1635

Product Name: Low-Flow System

Date: 2017-04-24 14:29:56

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Bladder QED
Tubing Type Dual LDPE
Tubing Diameter 0.175 in
Tubing Length 45 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.50 ft
Screen Length 10 ft
Depth to Water 32.8 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.5528427 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 21.25 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%	+/- 5		+/- 0.2	+/- 100
Last 5	14:00:46	1500.02	20.87	6.42	125.26	1.15	32.92	3.32	69.33
Last 5	14:05:46	1800.02	20.93	6.35	118.34	1.05	32.92	3.50	71.39
Last 5	14:10:46	2100.01	21.01	6.32	113.21	0.94	32.93	3.64	72.70
Last 5	14:15:46	2400.00	21.00	6.29	110.08	0.80	32.92	3.71	74.10
Last 5	14:20:46	2700.00	21.37	6.26	107.87	1.32	32.92	3.71	76.24
Variance 0			0.08	-0.03	-5.13			0.14	1.31
Variance 1			-0.00	-0.03	-3.13			0.07	1.40
Variance 2			0.36	-0.03	-2.21			-0.00	2.14

Notes

1335 start purge at 500mL/min; 1415 reduce purge rate to 250mL/min; 1420 3 well volumes purged, all parameters stable; 1425 sampled at 250mL/min. 75F Mostly Cloudy, light breeze.

Grab Samples

GWC-11
Sampled at 1425

Product Name: Low-Flow System

Date: 2017-04-20 15:24:38

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF - 4
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 44 ft

Pump placement from TOC 36 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.3 ft
Screen Length 10 ft
Depth to Water 26.41 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2981128 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:06:40	300.06	22.21	5.16	24.98	0.33	26.64	5.62	195.70
Last 5	15:11:40	600.03	21.72	5.15	25.56	0.12	26.65	5.54	185.05
Last 5	15:16:40	900.02	22.24	5.15	25.75	0.40	26.65	5.54	178.17
Last 5	15:21:40	1200.03	22.56	5.15	25.65	0.15	26.65	5.50	173.14
Last 5									
Variance 0			-0.49	-0.00	0.57			-0.08	-10.65
Variance 1			0.51	0.00	0.19			0.00	-6.88
Variance 2			0.32	-0.00	-0.10			-0.04	-5.03

Notes

Begin purging at 1501. Stable at 1521. Sample at 1525. Sample rate 0.2L/min. Additional Radium sample taken. Weather is sunny.

Grab Samples

GWC - 12
1525

Product Name: Low-Flow System

Date: 2017-04-20 11:14:02

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF - 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 24.47 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2933831 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.36 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		+/- 0.2	+/- 100
Last 5	10:56:53	300.11	22.35	5.02	22.46	1.50	24.49	6.71	201.22
Last 5	11:01:53	599.97	22.03	5.04	22.91	2.07	24.50	6.54	200.36
Last 5	11:06:53	899.96	21.72	5.01	23.16	1.26	24.50	6.51	202.31
Last 5	11:11:53	1199.96	21.60	5.01	23.29	0.14	24.50	6.56	203.08
Last 5									
Variance 0			-0.32	0.02	0.45			-0.17	-0.85
Variance 1			-0.30	-0.03	0.26			-0.03	1.95
Variance 2			-0.12	-0.01	0.12			0.05	0.76

Notes

Begin purging at 1051. Well stable at 1111. Sample at 1115. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

GWA - 13
1115

Product Name: Low-Flow System

Date: 2017-04-20 11:37:00

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 44.90 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49.90 ft
Screen Length 10 ft
Depth to Water 24.60 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8.28 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	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:18:12	300.03	23.35	5.41	28.72	0.63	25.12	6.07	87.54
Last 5	11:23:12	600.03	21.78	5.38	29.02	0.66	25.22	6.10	80.14
Last 5	11:28:11	899.98	22.22	5.40	28.71	0.40	25.28	6.06	80.71
Last 5	11:33:11	1199.97	22.09	5.31	28.67	0.32	25.29	6.18	82.27
Last 5									
Variance 0			-1.56	-0.04	0.31			0.03	-7.40
Variance 1			0.44	0.03	-0.31			-0.04	0.56
Variance 2			-0.13	-0.09	-0.04			0.12	1.56

Notes

Purge started at 1113. Purge rate at 200 mL/min. Weather - sunny/ partly cloudy 71F.
Parameters stable at 1133. Well sampled at 1140. Sample rate at 200 mL/min. Weather - sunny/ partly cloudy 73F.

Grab Samples

GWA-14
Sampled at 1140

Product Name: Low-Flow System

Date: 2017-04-20 12:23:17

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF - 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.3 ft
Screen Length 10 ft
Depth to Water 20.23 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2933831 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.16 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		+/- 0.2	+/- 100
Last 5	12:05:52	300.09	22.61	5.10	25.72	2.02	20.48	7.00	222.32
Last 5	12:10:52	600.03	22.39	5.10	25.66	2.07	20.48	6.80	213.19
Last 5	12:15:52	900.02	22.35	5.14	25.67	1.60	20.48	6.64	206.68
Last 5	12:20:52	1200.03	22.12	5.12	25.67	1.54	20.48	6.61	198.83
Last 5									
Variance 0			-0.22	0.00	-0.06			-0.20	-9.13
Variance 1			-0.04	0.04	0.01			-0.16	-6.51
Variance 2			-0.23	-0.02	-0.00			-0.03	-7.85

Notes

Begin purging at 1200. Well stable at 1220. Sample at 1225. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

GWA - 15
1225

Product Name: Low-Flow System

Date: 2017-04-20 13:14:55

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 45.27 ft

Pump placement from TOC 35.27 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 22.89 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2920592 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.72 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:52:04	600.03	23.18	5.02	23.28	1.11	23.20	7.57	99.16
Last 5	12:57:04	900.02	23.57	5.09	22.94	1.34	23.20	7.35	97.87
Last 5	13:02:04	1200.02	23.93	5.11	22.75	1.37	23.20	7.25	98.75
Last 5	13:07:04	1500.02	24.16	5.06	23.08	1.02	23.20	7.15	102.82
Last 5	13:12:04	1800.02	24.46	5.05	23.00	0.79	23.20	7.14	105.02
Variance 0			0.36	0.02	-0.19			-0.11	0.88
Variance 1			0.23	-0.04	0.33			-0.09	4.07
Variance 2			0.31	-0.01	-0.09			-0.01	2.20

Notes

Purge started at 1242. Purge rate at 200 mL/min. Weather - partly cloudy / sunny 70F.
Parameters stable at 1312. Well sampled at 1320. Sample rate at 200 mL/min. Weather - partly cloudy/ sunny 70 F.

Grab Samples

GWA-16
Sampled at 1320

Product Name: Low-Flow System

Date: 2017-04-20 13:29:38

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF - 4
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 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 10 ft
Depth to Water 26.28 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2933831 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.36 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		+/- 0.2	+/- 100
Last 5	13:11:50	300.09	23.56	5.35	32.86	0.97	26.55	5.13	198.65
Last 5	13:16:50	600.03	23.42	5.38	32.50	0.32	26.56	5.18	187.08
Last 5	13:21:50	900.03	23.65	5.38	32.62	0.62	26.56	5.11	180.04
Last 5	13:26:50	1200.02	23.62	5.36	32.90	1.11	26.56	5.05	173.93
Last 5									
Variance 0			-0.14	0.03	-0.35			0.05	-11.57
Variance 1			0.23	-0.00	0.12			-0.07	-7.04
Variance 2			-0.03	-0.01	0.28			-0.05	-6.11

Notes

Begin purging at 1306. Well stable at 1326. Sample at 1335. Sample rate 0.2L/min. DUP-1 taken. Weather is sunny.

Grab Samples

GWC - 17
1335
DUP - 1
1335



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: 0372392 Sampling Date: 4-25-17

Site: Plant McIntosh Location: (Circle one) LF4 AP LF3 Sampler's Name: Markus Thomas

Well ID: 6WC-19 Pump Type/Model: Bladder / RED Sample Collection Time: 11:05

Total Depth (ft)¹: 44.45 36.95 Tubing Material: Dual LDFE Sample Purge Rate (L/min)³: 2.50

Depth to Water (ft): 29.85 Pump Intake Depth (ft): 33 Sample ID: 6WC-19

Well Diameter (in): 2 Start/Stop Purge Time: 1005/1135 Laboratory Analyses: See Log

Well Volume (gal) = 0.041d²h: 1.222 Purge Rate (L/min)²: 5; .25; .125

Well Volume (L) = gal * 3.785: 4.627 Total Purge Volume (L): 28.125

d = well diameter (inches) h = length of water column (feet) Purge Method: Low-Flow Well Volume Other: _____ QA/QC Collected? No

Well Type: Flush Stick Up Sampling Method: Pump Discharge Other: _____ QA/QC I.D. _____

Well Lock: Yes No Bolts Needed: _____

Well Bolted: Yes No Other _____

Well Cap Condition: Good Replace Other _____

Well Tag Present: Yes No Water in Vault: Yes No No

All sample containers requiring chemical preservation properly preserved prior to demob from well? Yes No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H ₂ O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1010	19.51	102.30	3.13	5.61	44.50	50.1	500	2.5	29.80	
1015	19.50	99.40	3.03	5.54	47.60	33.0	500	2.5	29.89	1 st Well Volume
1020	19.54	99.60	2.93	5.55	48.80	25.5	500	2.5	29.92	
1025	19.63	99.80	2.94	5.55	49.60	25.2	500	2.5	29.92	2 nd Well Volume
1030	19.72	99.80	3.01	5.58	90.00	20.5	500	2.5	29.92	
1035	19.74	99.70	3.05	5.57	90.50	12.1	500	2.5	29.92	3 rd Well Volume 29.92 (ft btoc) Reduce Purge Rate to 250ml/min
1040	19.67	100.20	3.05	5.58	92.60	15.2	250	1.25	29.69	
1045	19.67	100.00	3.06	5.57	93.80	12.3	250	1.25	29.69	
1050	19.70	99.20	3.09	5.56	94.10	12.0	250	1.25	29.67	Reduce purge rate to 1.25 ml/min
1055	19.91	99.40	3.10	5.60	92.80	12.0	125	.625	29.56	
1100	19.93	99.60	3.15	5.59	94.10	9.02	125	.625	29.53	
1105	19.94	99.80	3.13	5.58	95.20	8.34	125	.625	29.52	Increase purge rate to 250ml/min
1110	19.94	99.60	3.14	5.59	94.50	7.0	250	1.25	29.67	5.60 pH
1115	19.97	99.40	3.14	5.59	95.20	6.99	150	1.25	29.67	
1120	20.08	99.80	3.12	5.60	95.30	5.49	250	1.25	29.66	
1125	20.09	99.70	3.31	5.53	96.10	4.94	250	1.25	29.64	
1130	20.16	97.40	3.26	5.58	96.00	4.95	250	1.25	29.68	
1135	20.03	97.80	3.25	5.59	96.70	4.70	250	1.25	29.68	
										All Parameters Stable 6.700 pH at the end of log run Actual depth 37.76 Mark 1.76
Stabilizing Criteria ^{4, 5}		+/- 5%	0.2 mg/L or 10% whichever is greater ⁽⁶⁾	+/- 0.1 unit		<5 NTUs	>100 mL < 500 mL	>3L	<0.33 ft	

- (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. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft.
- (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)

Purge Log QA/QC'd By: _____
Date: _____

Purge Log QA/QC'd By: _____
Date: _____

Product Name: Low-Flow System

Date: 2017-04-25 10:42:29

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 35 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-20
Well diameter 2 in
Well Total Depth 30.13 ft
Screen Length 10 ft
Depth to Water 22.73 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	10:19:07	1801.03	19.10	5.03	48.28	0.26	22.81	5.01	87.20
Last 5	10:24:07	2101.03	18.96	4.90	48.63	0.21	22.78	4.98	92.58
Last 5	10:29:07	2401.03	19.24	5.01	48.86	0.23	22.78	4.91	90.31
Last 5	10:34:07	2701.03	19.42	5.00	48.47	0.03	22.78	4.85	88.58
Last 5	10:39:07	3000.91	19.43	4.91	48.71	0.16	22.78	4.89	92.49
Variance 0			0.27	0.11	0.23			-0.08	-2.27
Variance 1			0.18	-0.01	-0.39			-0.06	-1.74
Variance 2			0.01	-0.08	0.24			0.04	3.91

Notes

Weather: 63F Cloudy. Purge Time: 0950/1040. Purged 3 well volumes.

Grab Samples

GWC-20
Sample Time 1045

Product Name: Low-Flow System

Date: 2017-04-24 16:36:31

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF - 4
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 32 ft

Pump placement from TOC 22 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 27.16 ft
Screen Length 10 ft
Depth to Water 20.60 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8.52 in
Total Volume Pumped 13 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	16:10:59	1200.02	21.72	5.90	39.02	9.00	21.89	5.57	88.75
Last 5	16:15:59	1500.02	21.79	5.78	39.26	4.67	21.94	5.65	91.48
Last 5	16:20:59	1800.02	22.92	5.87	39.06	1.39	21.49	5.41	92.63
Last 5	16:25:59	2100.02	22.15	5.80	38.81	0.32	21.35	5.49	98.10
Last 5	16:30:59	2400.02	21.82	5.80	38.97	0.21	21.31	5.58	98.88
Variance 0			1.12	0.08	-0.20			-0.24	1.15
Variance 1			-0.77	-0.07	-0.25			0.08	5.47
Variance 2			-0.32	0.00	0.16			0.09	0.78

Notes

Weather: 76F Partly Cloudy. Purge Time: 1550/1630. Purged 3 well volumes.

Grab Samples

GWC-21
Sample Time 1635

Product Name: Low-Flow System

Date: 2017-04-25 15:48:54

Project Information:

Operator Name Cayce Hurdle
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Bladder QED
Tubing Type Dual LDPE
Tubing Diameter 0.175 in
Tubing Length 38 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.70 ft
Screen Length 10 ft
Depth to Water 28.30 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.5197339 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 26.28 in
Total Volume Pumped 10.25 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%	+/- 5		+/- 0.2	+/- 100
Last 5	15:24:21	2100.00	21.77	5.66	72.80	9.67	29.85	0.60	107.30
Last 5	15:29:21	2400.01	21.31	5.67	69.40	3.94	30.11	1.03	101.83
Last 5	15:34:21	2700.01	21.54	5.67	67.64	4.70	30.26	1.17	99.43
Last 5	15:39:21	3000.08	21.61	5.65	66.32	2.72	30.38	1.19	98.29
Last 5	15:44:21	3300.01	21.35	5.65	65.10	1.51	30.49	1.15	97.31
Variance 0			0.24	-0.01	-1.76			0.14	-2.40
Variance 1			0.06	-0.02	-1.32			0.02	-1.14
Variance 2			-0.26	0.00	-1.22			-0.04	-0.98

Notes

Weather: 79F Cloudy. Purge Time: 1450/1545. Purged 3 well volumes.

Grab Samples

GWC-23
Sample Time 1550

Product Name: Low-Flow System

Date: 2017-07-25 17:07:51

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Bladder/GeoTech
Tubing Type Dual LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 30 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.7 ft
Screen Length 10 ft
Depth to Water 28.3 ft

Pumping Information:

Final Pumping Rate 300 mL/min
Total System Volume 0.4435369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20.4 in
Total Volume Pumped 19.75 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%	+/- 10		+/- 0.2	+/- 100
Last 5	16:45:02	3299.95	22.54	5.23	40.29	5.43	30.00	2.97	129.72
Last 5	16:50:02	3599.96	22.62	5.24	40.33	5.49	30.00	3.00	129.01
Last 5	16:55:01	3899.86	22.41	5.24	40.01	4.48	30.00	3.06	129.49
Last 5	17:00:01	4199.86	22.18	5.24	39.66	3.65	30.00	3.14	129.83
Last 5	17:05:01	4499.86	22.41	5.24	39.94	3.13	30.00	3.21	130.31
Variance 0			-0.21	0.00	-0.32			0.06	0.48
Variance 1			-0.23	-0.00	-0.35			0.08	0.33
Variance 2			0.23	-0.00	0.27			0.07	0.48

Notes

3 well volume purge required due to water level within the screen. Purge started at 1550 at 300 ml/min. Weather - overcast 80 F. Parameters stable at 1705. Well sampled at 1710.

Grab Samples

GWC-23
1710

Product Name: Low-Flow System

Date: 2017-10-11 14:39:39

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 33 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 28.50 ft
Screen Length 10 ft
Depth to Water 14.58 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.32 in
Total Volume Pumped 2.5 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		+/- 0.3	+/- 100
Last 5	13:51:41	300.15	25.50	5.15	62.88	1.60	14.69	1.88	169.25
Last 5	13:56:41	600.03	24.60	5.24	63.35	3.15	14.69	1.77	162.82
Last 5	14:01:41	900.03	24.64	5.26	62.10	2.12	14.69	1.75	161.03
Last 5	14:06:41	1200.07	24.69	5.24	61.50	1.63	14.69	1.75	162.53
Last 5	14:11:41	1500.05	24.55	5.25	60.57	1.35	14.69	1.87	162.02
Variance 0			0.04	0.02	-1.25			-0.02	-1.80
Variance 1			0.05	-0.02	-0.60			0.01	1.50
Variance 2			-0.14	0.01	-0.93			0.12	-0.51

Notes

GWC-1 Sample Time: 1415. Purge rate: 100 mL/min. Purge Time: 1346 to 1411

Grab Samples

GWC-1
Sample Time: 1415

Product Name: Low-Flow System

Date: 2017-10-10 15:08:54

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 33 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWA-2
Well diameter 2 in
Well Total Depth 28.5 ft
Screen Length 10 ft
Depth to Water 16.19 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.8 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		+/- 0.3	+/- 100
Last 5	14:36:58	600.03	23.42	5.15	40.96	3.98	16.33	4.11	98.12
Last 5	14:41:58	899.98	23.42	5.04	40.94	2.39	16.34	4.08	120.07
Last 5	14:46:58	1199.98	23.35	5.00	40.78	1.85	16.34	4.07	133.51
Last 5	14:51:58	1499.98	23.33	4.91	40.70	1.41	16.34	4.07	147.41
Last 5	14:56:58	1799.98	23.24	4.93	40.74	1.34	16.34	4.06	154.31
Variance 0			-0.07	-0.03	-0.17			-0.02	13.44
Variance 1			-0.02	-0.09	-0.08			0.00	13.89
Variance 2			-0.09	0.02	0.04			-0.01	6.90

Notes

GWA-2 Sample Time: 1502. Purge rate: 250 mL/min. Purge Time: 1427 to 1457.

Grab Samples

GWA-2
Sample Time: 1502

Product Name: Low-Flow System

Date: 2017-10-11 11:01:35

Project Information:

Operator Name Patrick Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 43.50 ft

Pump placement from TOC 33.50 ft

Well Information:

Well ID GWA-3
Well diameter 2 in
Well Total Depth 38.50 ft
Screen Length 10 ft
Depth to Water 18.30 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2841589 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 52.2 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	10:25:01	600.03	23.51	5.27	29.27	1.25	22.05	5.70	252.45
Last 5	10:30:01	900.03	23.97	5.07	29.74	0.45	22.45	5.79	250.13
Last 5	10:35:01	1200.03	24.54	5.01	29.74	1.32	22.54	5.68	247.65
Last 5	10:40:01	1500.03	24.60	4.97	29.51	4.04	22.61	5.55	245.45
Last 5	10:45:01	1800.03	24.54	4.96	29.51	1.30	22.65	5.55	242.22
Variance 0			0.57	-0.06	-0.00			-0.11	-2.48
Variance 1			0.06	-0.04	-0.22			-0.13	-2.20
Variance 2			-0.06	-0.01	-0.00			-0.00	-3.23

Notes

Purging started @ 1015/stopped 1045. Parameters stabilized @ 1045. GWA-3 sampled @ 1050 w/ 100 ml/min.

Grab Samples

GWA-3
Sample taken @ 1050 w/ 100 ml/min

Product Name: Low-Flow System

Date: 2017-10-10 15:04:48

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 49 ft

Pump placement from TOC 34 ft

Well Information:

Well ID GWA-4A
Well diameter 2 in
Well Total Depth 39 ft
Screen Length 10 ft
Depth to Water 23.97 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3087077 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.72 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	14:41:00	899.87	25.18	5.51	54.54	0.38	24.28	0.27	76.49
Last 5	14:46:00	1199.87	25.10	5.38	52.87	0.27	24.28	0.25	71.61
Last 5	14:51:00	1499.87	24.92	5.32	50.75	0.33	24.28	0.26	68.09
Last 5	14:56:00	1799.87	24.82	5.29	50.21	0.33	24.28	0.26	65.33
Last 5	15:01:00	2099.87	24.99	5.28	48.88	0.27	24.28	0.27	62.96
Variance 0			-0.18	-0.06	-2.12			0.01	-3.52
Variance 1			-0.10	-0.03	-0.53			0.01	-2.76
Variance 2			0.17	-0.01	-1.34			0.00	-2.37

Notes

Purge time: 1426/1501. Parameters stable at 1501. GWA-4A sampled at 1505.

Grab Samples

GWA-4A
1505

Product Name: Low-Flow System

Date: 2017-10-11 11:15:01

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 46 ft

Pump placement from TOC 36 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 41.50 ft
Screen Length 10 ft
Depth to Water 23.15 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2953174 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.48 in
Total Volume Pumped 8.75 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		+/- 0.3	+/- 100
Last 5	10:40:08	900.02	22.98	5.56	38.70	0.95	23.43	5.96	121.75
Last 5	10:45:08	1200.02	22.89	5.59	37.35	0.73	23.45	5.91	123.16
Last 5	10:50:08	1500.02	22.82	5.60	36.16	0.60	23.44	6.03	126.43
Last 5	10:55:08	1800.02	22.75	5.61	34.75	0.63	23.44	6.12	129.88
Last 5	11:00:08	2100.02	22.66	5.62	36.44	0.36	23.44	5.96	131.66
Variance 0			-0.06	0.01	-1.18			0.11	3.27
Variance 1			-0.07	0.00	-1.41			0.09	3.45
Variance 2			-0.09	0.01	1.69			-0.16	1.78

Notes

GWA-5 Sample Time: 1103. Purge rate: 250 mL/min. Purge Time: 1025 to 1100

Grab Samples

GWA-5
Sample Time: 1103

Product Name: Low-Flow System

Date: 2017-10-12 10:55:13

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 48.5 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID GWC-9
Well diameter 2 in
Well Total Depth 38.50 ft
Screen Length 10 ft
Depth to Water 28.05 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.306476 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 21.25 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			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:32:01	1800.02	22.31	4.66	52.85	0.36	28.12	6.76	199.43
Last 5	10:37:01	2100.03	22.31	4.86	52.66	0.32	28.12	6.72	197.56
Last 5	10:42:01	2400.03	22.95	4.86	52.24	0.48	28.09	6.43	197.50
Last 5	10:47:01	2700.03	23.16	4.86	52.09	0.61	28.09	6.35	197.75
Last 5	10:52:00	2999.94	23.22	4.85	54.38	0.46	28.09	6.44	194.84
Variance 0			0.63	0.00	-0.43			-0.29	-0.07
Variance 1			0.21	0.00	-0.14			-0.07	0.25
Variance 2			0.06	-0.01	2.28			0.08	-2.91

Notes

Purge time: 1002/1052. Parameters stable at 1052. GWC-9 sampled at 1100.

Grab Samples

GWC-9
1100

Product Name: Low-Flow System

Date: 2017-10-12 13:12:39

Project Information:

Operator Name Patrick Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 38.50 ft

Pump placement from TOC 28.50 ft

Well Information:

Well ID GWC-10
Well diameter 2 in
Well Total Depth 33.50 ft
Screen Length 10 ft
Depth to Water 24.14 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2618418 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 23.75 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:40:05	3303.90	21.97	6.17	170.31	0.37	24.22	3.69	98.01
Last 5	12:45:05	3603.90	22.10	6.12	153.93	0.57	24.22	3.73	100.57
Last 5	12:50:05	3903.90	22.13	6.14	165.02	0.41	24.22	3.74	101.86
Last 5	12:55:05	4203.90	22.17	6.13	164.54	0.39	24.21	3.78	99.57
Last 5	13:00:05	4503.90	21.92	6.11	159.79	0.41	24.21	3.78	99.69
Variance 0			0.03	0.02	11.09			0.01	1.29
Variance 1			0.04	-0.01	-0.48			0.04	-2.29
Variance 2			-0.25	-0.02	-4.75			0.01	0.12

Notes
Purging started @ 1145/stopped 1300. Parameters stable @ 1300. Sample GWC-10 taken @ 1305. w/ 250 ml/min.

Grab Samples

GWC-10
Sample taken @ 1305 w/ 250 ml/min

Product Name: Low-Flow System

Date: 2017-10-11 15:16:34

Project Information:

Operator Name Patrick Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 48.50 ft

Pump placement from TOC 38.50 ft

Well Information:

Well ID GWC-11
Well diameter 2 in
Well Total Depth 43.50 ft
Screen Length 10 ft
Depth to Water 32.67 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.306476 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:40:13	2401.01	21.96	6.42	117.66	0.98	32.74	2.46	52.30
Last 5	14:45:13	2701.01	21.92	6.40	113.66	1.08	32.74	2.59	53.21
Last 5	14:50:13	3001.01	21.91	6.38	110.91	0.75	32.74	2.66	54.18
Last 5	14:55:13	3301.01	21.88	6.36	107.05	0.96	32.74	2.76	56.18
Last 5	15:00:12	3600.98	22.09	6.35	105.68	1.03	32.74	2.79	56.68
Variance 0			-0.01	-0.02	-2.75			0.07	0.97
Variance 1			-0.03	-0.02	-3.86			0.10	2.00
Variance 2			0.21	-0.01	-1.37			0.03	0.50

Notes

Purging started @ 1400/stopped 1500. Parameters stabilized @ 1500. Samples GWC-11 and DUP-2 taken @ 1505 w/ 200 ml/min.

Grab Samples

GWC-11
Sample taken @ 1505 w/ 200 ml/min
DUP-2
Sample taken @ 1505 w/ 200 ml/min

Product Name: Low-Flow System

Date: 2017-10-12 10:57:31

Project Information:

Operator Name Patrick Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 46.30 ft

Pump placement from TOC 36.30 ft

Well Information:

Well ID GWC-12
Well diameter 2 in
Well Total Depth 41.30 ft
Screen Length 10 ft
Depth to Water 26.85 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2966565 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.12 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	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:20:00	600.03	22.05	5.67	25.01	1.17	26.09	5.37	221.96
Last 5	10:25:00	900.03	22.04	5.26	25.60	0.64	26.10	5.29	215.94
Last 5	10:30:00	1200.03	22.04	5.10	25.73	0.59	26.11	5.25	216.42
Last 5	10:35:00	1500.03	22.09	5.04	25.63	0.46	26.11	5.25	213.73
Last 5	10:40:00	1800.03	22.13	5.03	25.96	0.49	26.11	5.19	210.28
Variance 0			-0.00	-0.16	0.13			-0.03	0.48
Variance 1			0.05	-0.06	-0.10			-0.01	-2.70
Variance 2			0.04	-0.01	0.33			-0.05	-3.44

Notes

Purging started @ 1010/stopped 1040. Parameters stabilized @ 1040. Sample GWC-12 taken @ 1045 w/ 200 ml/min.

Grab Samples

GWC-12
Sample taken @ 1045 w/ 200 ml/min

Product Name: Low-Flow System

Date: 2017-10-11 10:54:45

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 50 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-13
Well diameter 2 in
Well Total Depth 40.11 ft
Screen Length 10 ft
Depth to Water 23.87 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.36 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%	+/- 5		+/- 0.2	+/- 100
Last 5	10:31:01	1200.03	23.70	5.09	22.32	1.05	23.90	5.80	229.04
Last 5	10:36:01	1500.03	23.74	5.01	22.38	0.40	23.90	5.75	224.64
Last 5	10:41:01	1800.03	23.70	4.98	23.09	0.33	23.90	5.68	221.13
Last 5	10:46:01	2100.03	23.60	4.96	22.71	0.35	23.90	5.66	217.11
Last 5	10:51:01	2400.06	23.51	4.93	22.69	0.36	23.90	5.68	214.28
Variance 0			-0.04	-0.03	0.70			-0.07	-3.51
Variance 1			-0.09	-0.02	-0.38			-0.02	-4.02
Variance 2			-0.10	-0.02	-0.02			0.02	-2.83

Notes

Purge time: 1011/1051. Parameters stable at 1051. GWA-13 sampled at 1100.

Grab Samples

GWA-13
1100

Product Name: Low-Flow System

Date: 2017-10-11 12:36:31

Project Information:

Operator Name Patrick Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 54.90 ft

Pump placement from TOC 44.90 ft

Well Information:

Well ID GWA-14
Well diameter 2 in
Well Total Depth 49.90 ft
Screen Length 10 ft
Depth to Water 24.21 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3350419 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 10.68 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:05:05	900.03	23.01	5.26	27.19	1.97	25.11	5.86	178.80
Last 5	12:10:05	1200.02	22.97	5.27	25.84	1.53	25.12	5.83	181.13
Last 5	12:15:05	1500.03	22.98	5.27	27.41	1.53	25.11	5.85	186.22
Last 5	12:20:05	1800.03	22.94	5.28	27.20	0.97	25.11	5.75	186.12
Last 5	12:25:05	2100.03	23.03	5.27	27.21	1.71	25.10	5.74	185.87
Variance 0			0.02	0.00	1.58			0.02	5.09
Variance 1			-0.05	0.00	-0.21			-0.10	-0.10
Variance 2			0.09	-0.00	0.01			-0.02	-0.25

Notes
Purging started @ 1150/stopped 1225. Parameters stabilized @ 1225. Sample GWA-14 taken @ 1230 w/ 200ml/min

Grab Samples
GWA-14
Sample taken @ 1230 w/ 200 ml/min

Product Name: Low-Flow System

Date: 2017-10-11 12:34:00

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 50 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-15
Well diameter 2 in
Well Total Depth 40.30 ft
Screen Length 10 ft
Depth to Water 19.66 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.92 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%	+/- 5		+/- 0.2	+/- 100
Last 5	12:10:02	600.03	24.94	5.00	25.17	3.69	19.82	6.10	209.72
Last 5	12:15:02	900.03	24.83	4.98	25.18	5.07	19.81	6.07	202.38
Last 5	12:20:02	1200.03	24.97	4.96	25.16	1.85	19.81	6.11	200.10
Last 5	12:25:02	1500.03	25.30	4.96	25.12	1.69	19.81	6.02	198.74
Last 5	12:30:02	1800.03	25.42	4.95	25.01	1.10	19.81	5.99	197.82
Variance 0			0.14	-0.02	-0.01			0.04	-2.29
Variance 1			0.34	0.00	-0.04			-0.09	-1.35
Variance 2			0.12	-0.01	-0.11			-0.03	-0.93

Notes

Purge time: 1200/1230. Parameters stable at 1230. GWA-15 sampled at 1240.

Grab Samples

GWA-15
1240

Product Name: Low-Flow System

Date: 2017-10-11 12:34:38

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 45 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWA-16
Well diameter 2 in
Well Total Depth 40.27 ft
Screen Length 10 ft
Depth to Water 22.65 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.28 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		+/- 0.3	+/- 100
Last 5	12:05:01	300.01	23.01	4.98	23.03	0.52	23.08	6.96	157.26
Last 5	12:10:01	599.94	22.61	5.10	23.14	1.34	23.10	7.15	155.14
Last 5	12:15:01	899.94	22.55	5.19	23.23	2.10	23.09	7.16	156.87
Last 5	12:20:01	1199.94	22.50	5.20	23.00	0.66	23.09	7.16	160.20
Last 5	12:25:01	1499.94	22.66	5.17	23.13	1.60	23.09	7.31	164.27
Variance 0			-0.05	0.09	0.09			0.00	1.73
Variance 1			-0.05	0.01	-0.23			0.01	3.33
Variance 2			0.16	-0.03	0.13			0.15	4.07

Notes

GWA-16 Sample Time: 1228. Purge rate: 250 mL/min. Purge Time: 1200 to 1225

Grab Samples

GWA-16
Sample Time: 1228

Product Name: Low-Flow System

Date: 2017-10-11 14:27:15

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
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 50 ft

Pump placement from TOC 35 ft

Well Information:

Well ID GWC-17
Well diameter 2 in
Well Total Depth 40.05 ft
Screen Length 10 ft
Depth to Water 26.12 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.32 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%	+/- 5		+/- 0.2	+/- 100
Last 5	14:04:00	600.03	24.65	5.24	32.51	0.60	26.23	4.85	185.64
Last 5	14:09:00	900.03	24.57	5.23	32.64	0.47	26.23	4.89	178.63
Last 5	14:14:00	1200.01	24.47	5.23	32.92	0.49	26.23	5.12	175.55
Last 5	14:19:00	1500.00	24.79	5.23	33.02	0.63	26.23	5.00	173.70
Last 5	14:24:00	1800.01	24.49	5.23	32.86	0.39	26.23	4.98	173.08
Variance 0			-0.10	-0.00	0.28			0.22	-3.08
Variance 1			0.32	0.00	0.11			-0.11	-1.85
Variance 2			-0.30	-0.01	-0.16			-0.03	-0.62

Notes

Purge time: 1354/1424. Parameters stable at 1424. GWC-17 sampled at 1430. DUP-1 sampled at 1430.

Grab Samples

GWC-17
1430

DUP-1
1430

Product Name: Low-Flow System

Date: 2017-10-12 13:28:31

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type QED Blader
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 37 ft

Well Information:

Well ID GWC-18
Well diameter 2 in
Well Total Depth 42.20 ft
Screen Length 10 ft
Depth to Water 35.16 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4024638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.24 in
Total Volume Pumped 21.65 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		+/- 0.3	+/- 100
Last 5	13:00:57	2700.03	21.45	6.54	117.19	9.13	35.71	5.00	94.94
Last 5	13:05:57	3000.03	21.63	6.55	115.51	7.36	35.70	5.10	95.37
Last 5	13:10:57	3300.03	21.62	6.52	114.70	4.70	35.70	5.10	96.63
Last 5	13:15:57	3599.97	21.57	6.51	114.59	3.51	35.67	5.01	97.55
Last 5	13:20:57	3899.97	21.42	6.53	114.60	2.86	35.68	5.03	97.17
Variance 0			-0.01	-0.03	-0.81			0.00	1.26
Variance 1			-0.05	-0.01	-0.11			-0.09	0.92
Variance 2			-0.16	0.02	0.01			0.01	-0.39

Notes

GWC-18 Sample Time: 1323. Purge rate: 500 mL/min, then 250 mL/min at 1241. Purge Time: 1216 to 1321

Grab Samples

GWC-18
Sample Time: 1323

Product Name: Low-Flow System

Date: 2017-10-12 10:58:28

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-19
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 29.27 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3935369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.48 in
Total Volume Pumped 16.25 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		+/- 0.3	+/- 100
Last 5	10:23:46	1200.02	20.43	5.77	91.75	8.48	29.67	3.28	116.16
Last 5	10:28:46	1500.03	20.43	5.70	91.79	7.68	29.67	3.32	120.35
Last 5	10:33:46	1800.02	20.73	5.70	91.62	5.88	29.55	3.26	120.92
Last 5	10:38:46	2100.02	20.79	5.69	91.63	5.85	29.57	3.29	122.30
Last 5	10:43:46	2400.02	20.83	5.68	91.69	4.70	29.56	3.29	123.79
Variance 0			0.30	0.00	-0.16			-0.05	0.56
Variance 1			0.06	-0.01	0.01			0.03	1.38
Variance 2			0.04	-0.01	0.06			-0.00	1.49

Notes

GWC-19 sample time: 1047. Purge rate: 500 mL/min, then 250 mL/min at 1033. Purge Time: 1003 to 1043

Grab Samples

GWC-19
Sample Time: 1047

Product Name: Low-Flow System

Date: 2017-10-12 14:52:28

Project Information:

Operator Name Patrick Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 32.16 ft

Pump placement from TOC 22.16 ft

Well Information:

Well ID GWC-21
Well diameter 2 in
Well Total Depth 27.16 ft
Screen Length 10 ft
Depth to Water 20.37 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2335437 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15.72 in
Total Volume Pumped 17.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:20:01	1499.93	22.15	4.91	38.73	2.93	23.00	5.40	196.08
Last 5	14:25:01	1799.93	22.40	4.89	38.76	3.78	22.42	5.26	193.65
Last 5	14:30:01	2099.93	22.49	4.88	38.75	3.99	21.90	5.32	192.42
Last 5	14:35:01	2399.98	22.54	4.91	38.64	4.84	21.72	5.36	189.85
Last 5	14:40:01	2699.94	22.49	4.89	38.58	2.81	21.68	5.36	189.07
Variance 0			0.09	-0.01	-0.01			0.07	-1.23
Variance 1			0.05	0.02	-0.11			0.03	-2.57
Variance 2			-0.04	-0.02	-0.06			0.00	-0.78

Notes

Purging started @ 1355/stopped 1440. Parameters stabilized @ 1440. GWC-21 taken @ 1445 w/ 250 ml/min.

Grab Samples

GWC-21
Sample taken @ 1445 w/ 250 ml/min

Product Name: Low-Flow System

Date: 2017-10-12 15:19:46

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 34 ft

Pump placement from TOC 29 ft

Well Information:

Well ID GWC-23
Well diameter 2 in
Well Total Depth 33.7 ft
Screen Length 10 ft
Depth to Water 28.12 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3667564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19.92 in
Total Volume Pumped 15 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		+/- 0.3	+/- 100
Last 5	14:50:24	2100.03	21.24	5.15	42.89	14.10	29.78	3.87	137.39
Last 5	14:55:24	2399.90	21.32	5.28	42.46	4.13	29.78	5.82	149.47
Last 5	15:00:24	2699.90	21.40	5.38	41.99	3.57	29.78	5.53	136.00
Last 5	15:05:24	2999.90	21.46	5.34	41.62	3.88	29.78	5.86	137.99
Last 5	15:10:24	3299.90	21.72	5.37	41.46	2.98	29.78	5.76	136.83
Variance 0			0.07	0.10	-0.47			-0.29	-13.47
Variance 1			0.06	-0.04	-0.36			0.33	1.99
Variance 2			0.26	0.03	-0.16			-0.10	-1.16

Notes

GWC-23 Sample Time: 1515. Purge rate: 500 mL/min, then 250 at 1425. Purge Time: 1415 to 1510. Water depth drew down below the top of bladder pump. Water level readings show depth of top of pump.

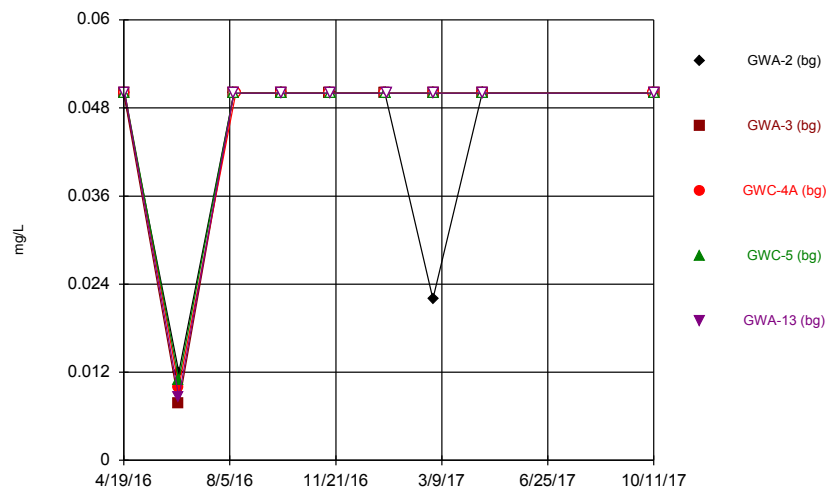
Grab Samples

GWC-23
Sample Time: 1515

Appendix B

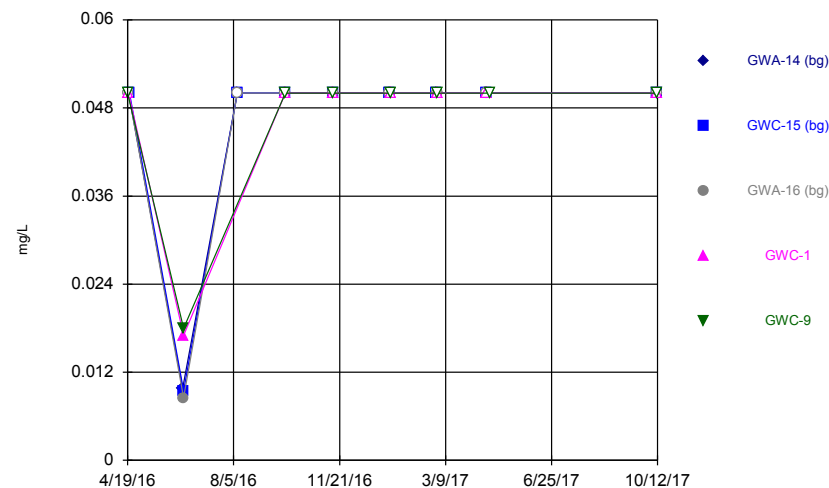
Statistical Analyses

Time Series



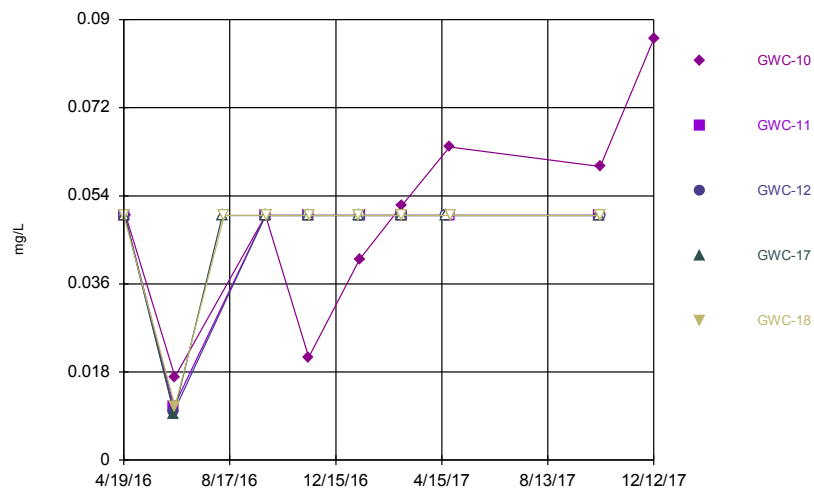
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



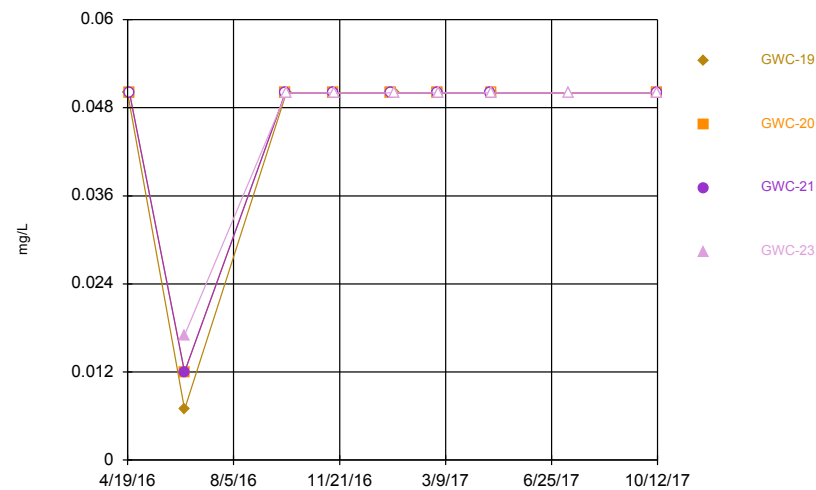
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



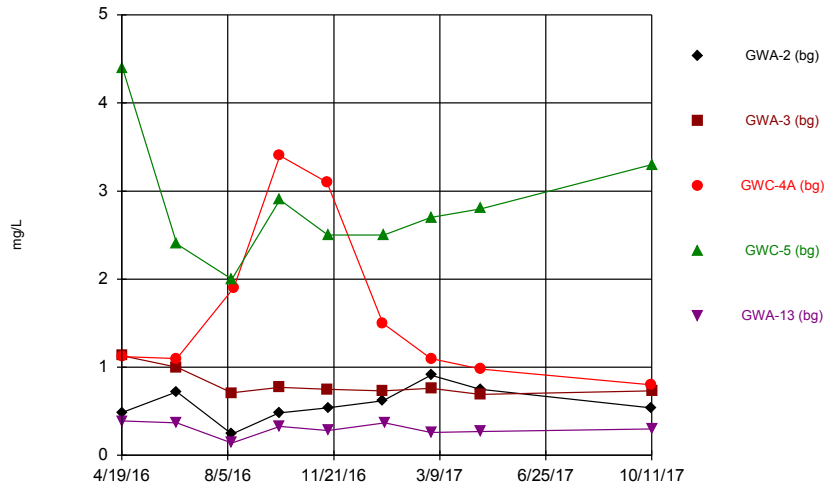
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



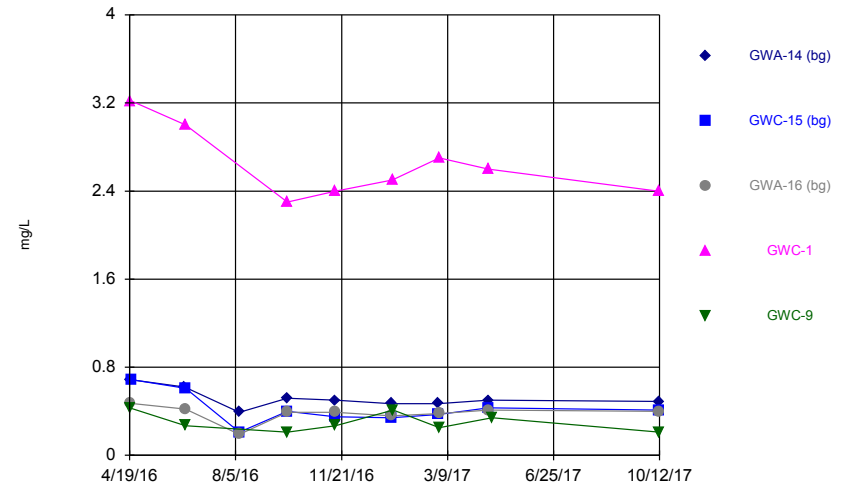
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



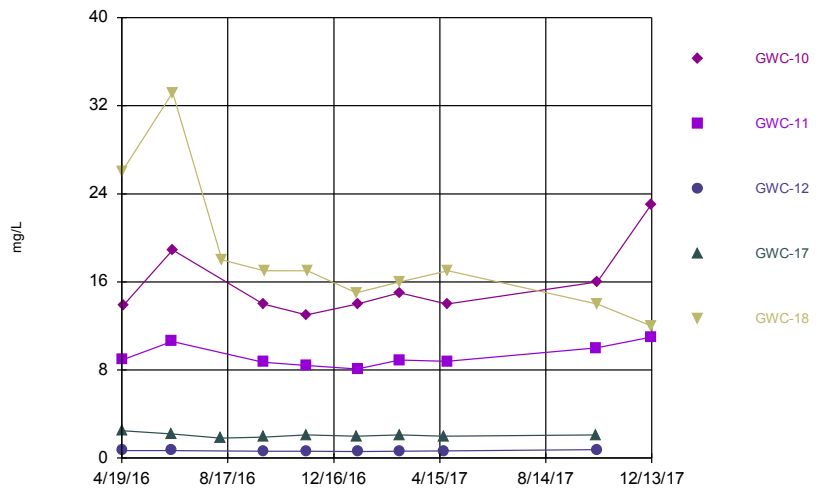
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



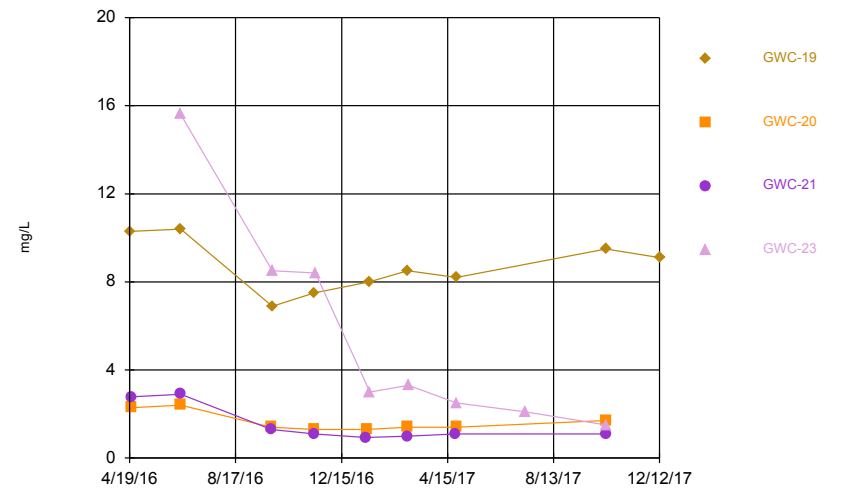
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



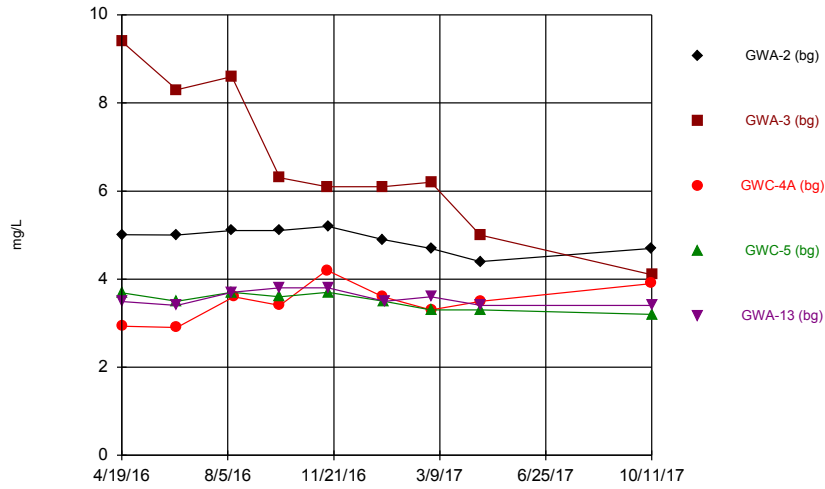
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



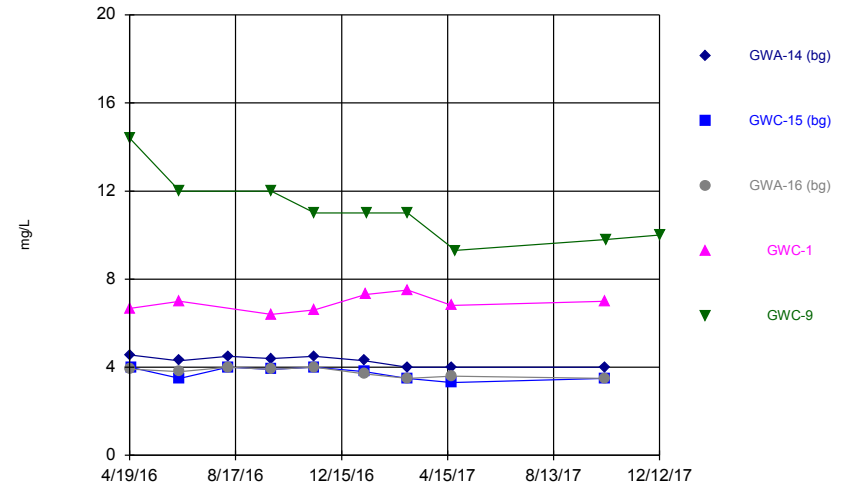
Constituent: Calcium Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



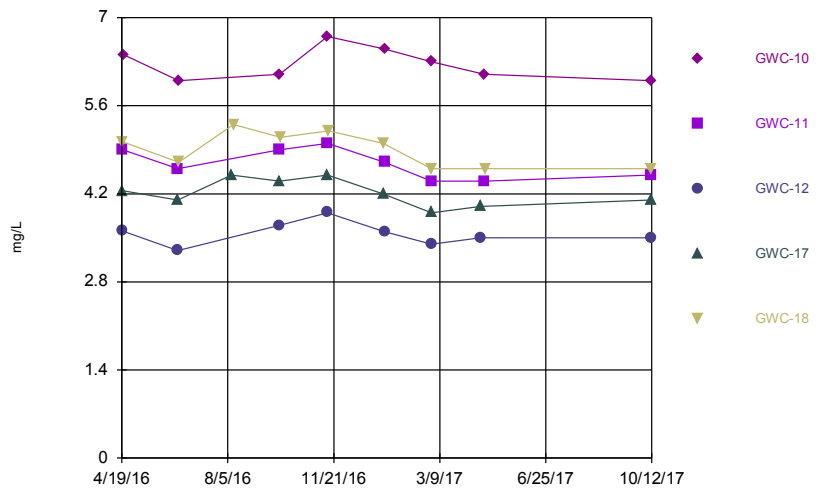
Constituent: Chloride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



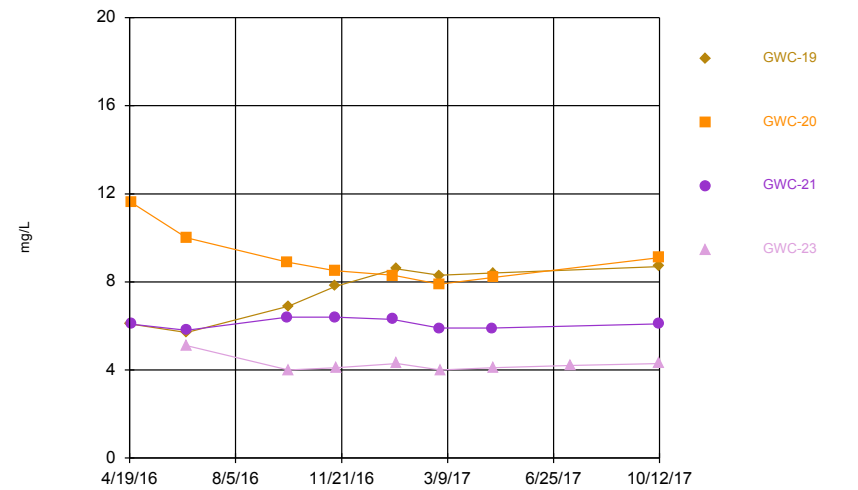
Constituent: Chloride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



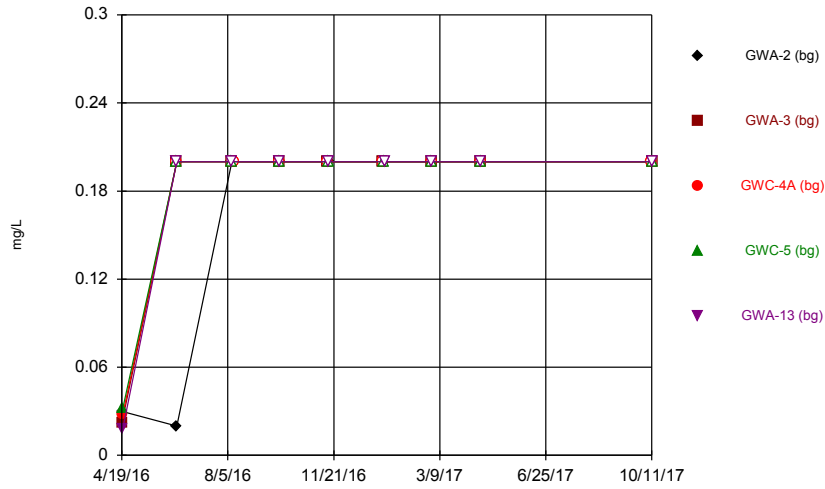
Constituent: Chloride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



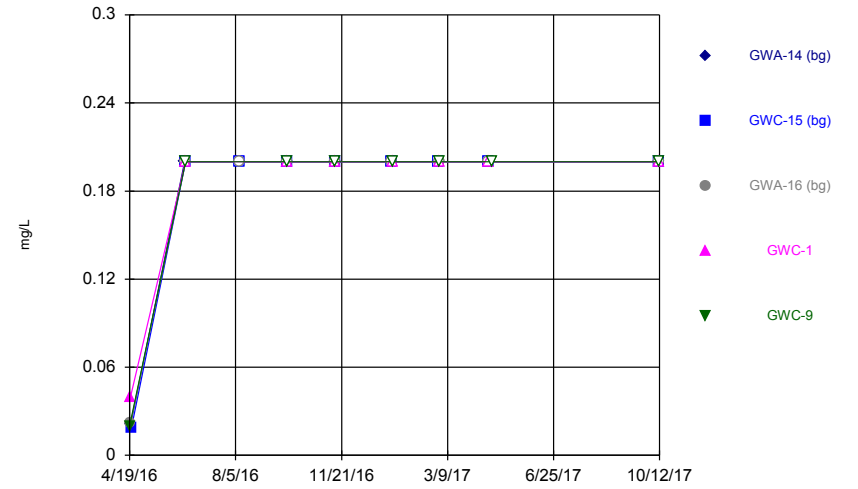
Constituent: Chloride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



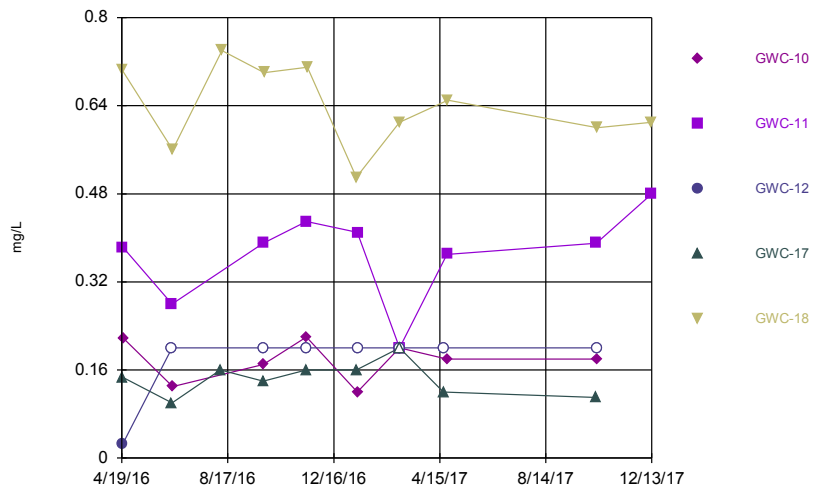
Constituent: Fluoride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



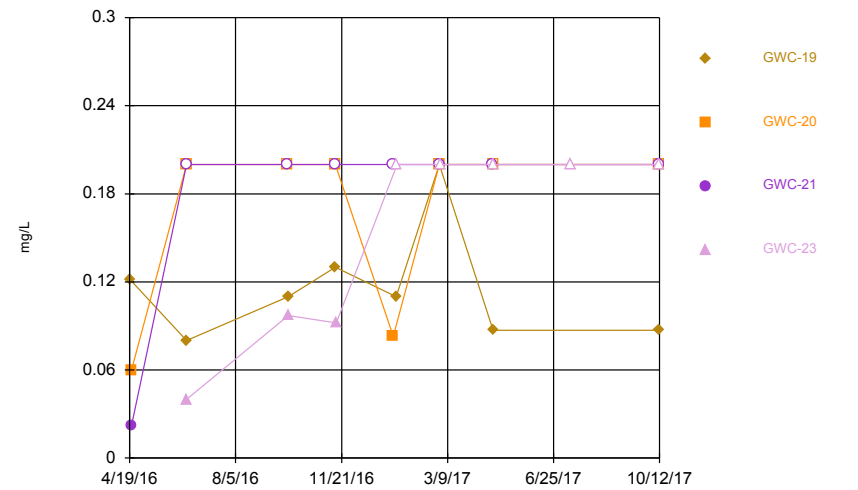
Constituent: Fluoride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



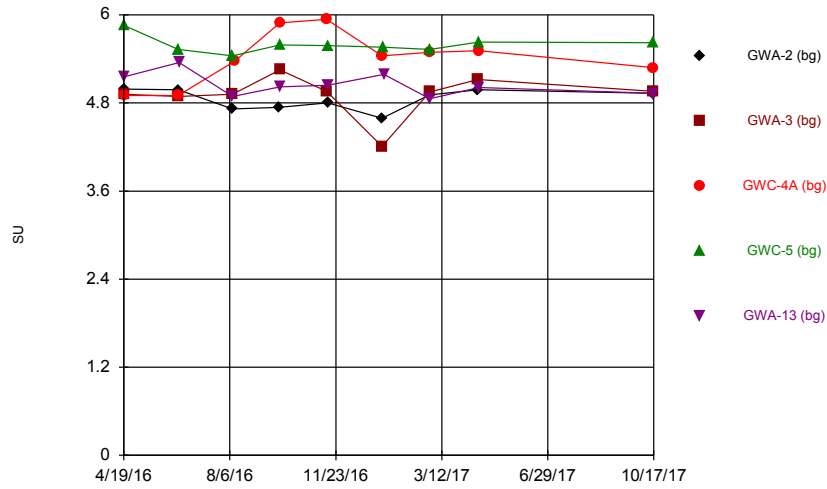
Constituent: Fluoride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



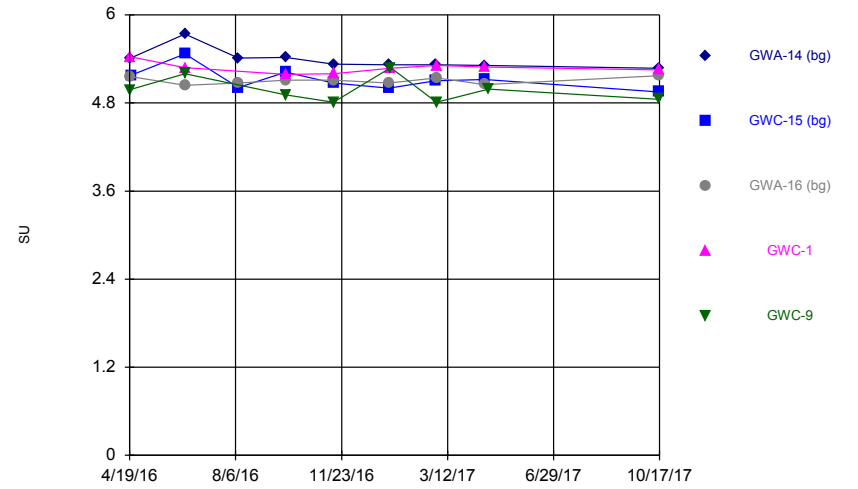
Constituent: Fluoride Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



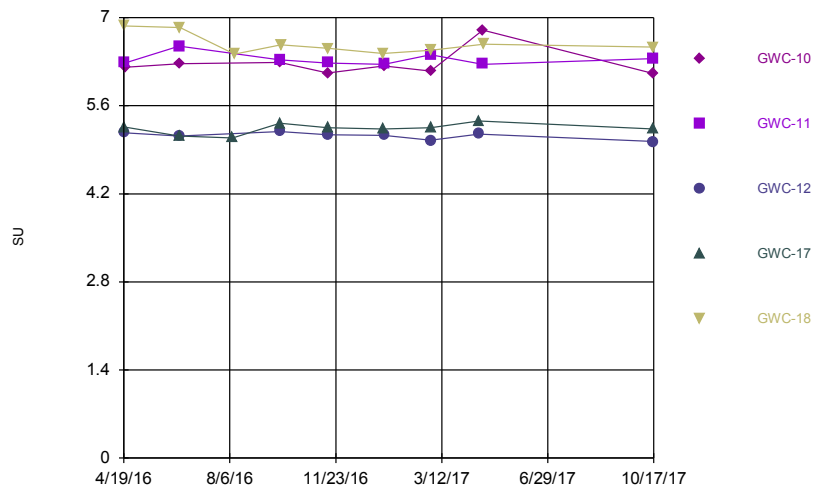
Constituent: pH Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



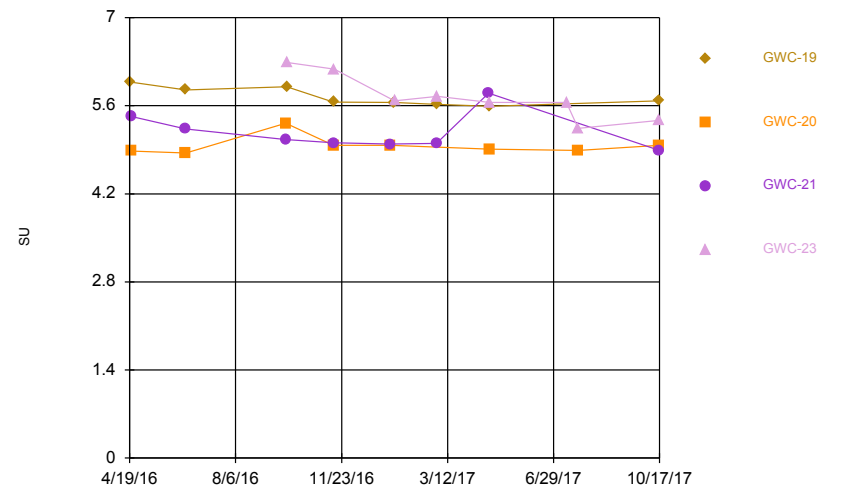
Constituent: pH Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



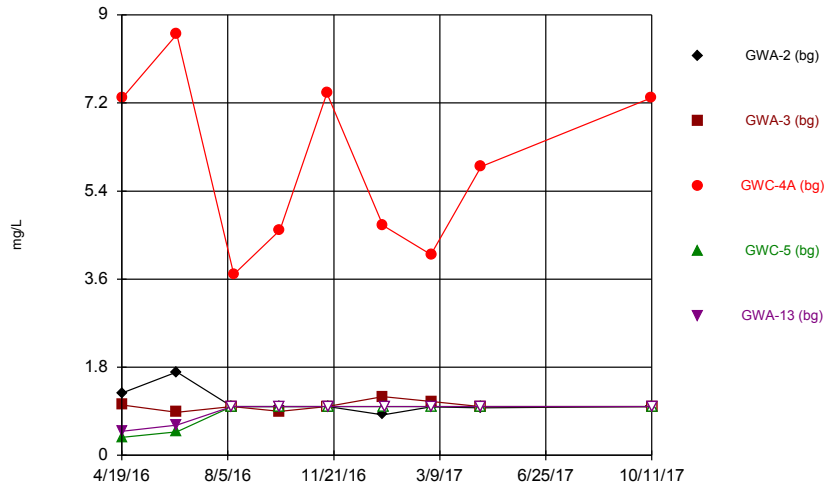
Constituent: pH Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



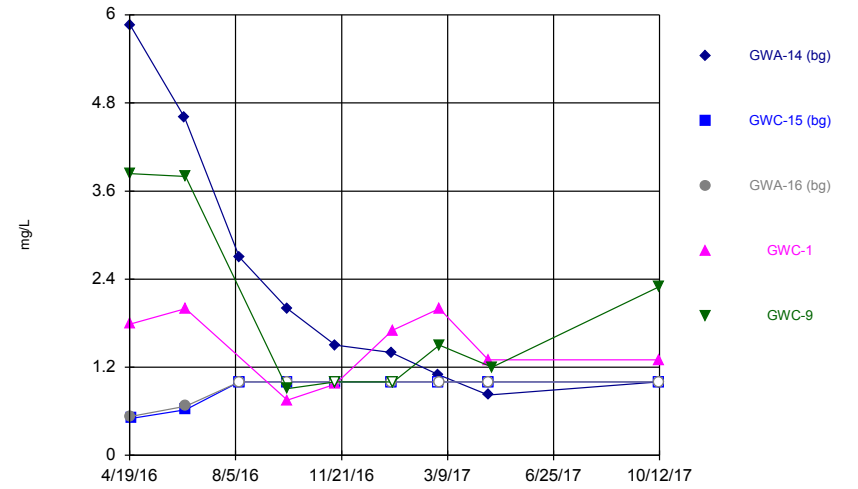
Constituent: pH Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



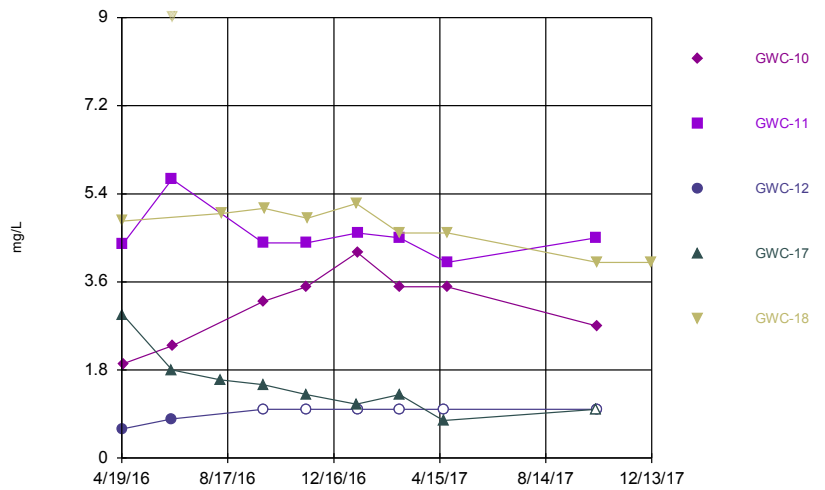
Constituent: Sulfate Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



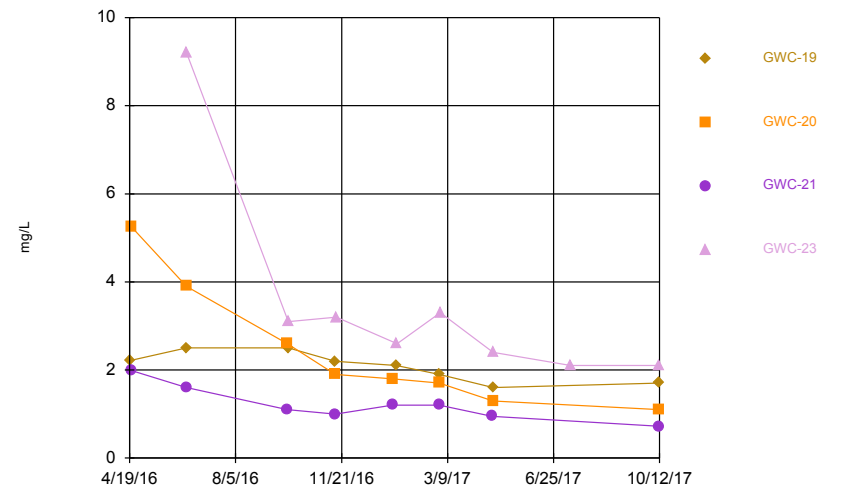
Constituent: Sulfate Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



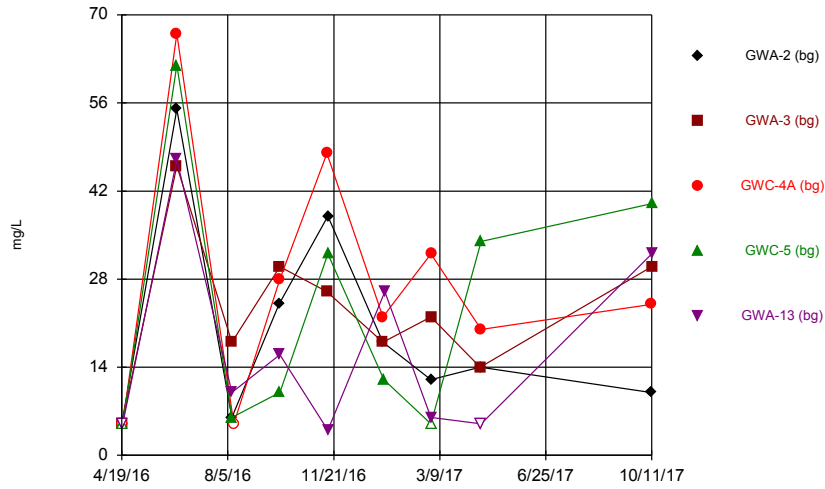
Constituent: Sulfate Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



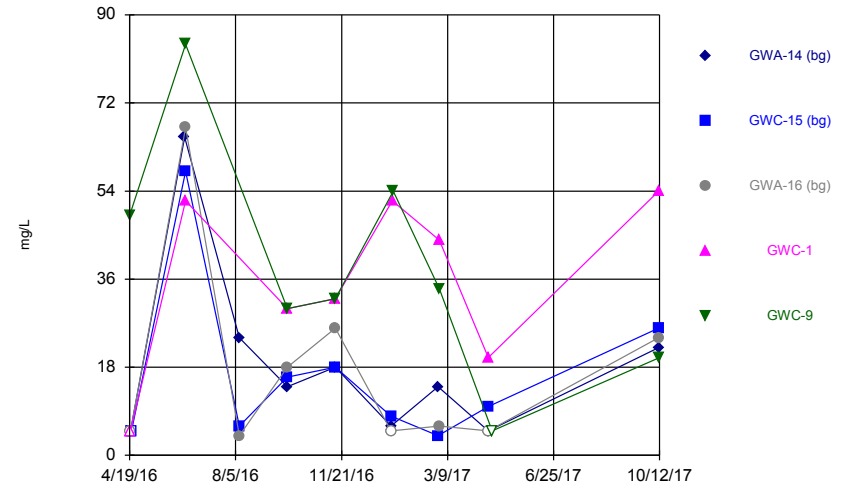
Constituent: Sulfate Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



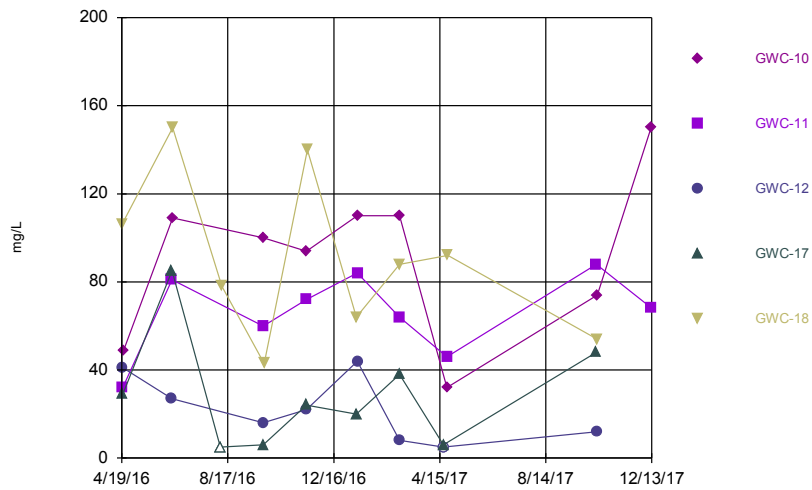
Constituent: Total Dissolved Solids Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



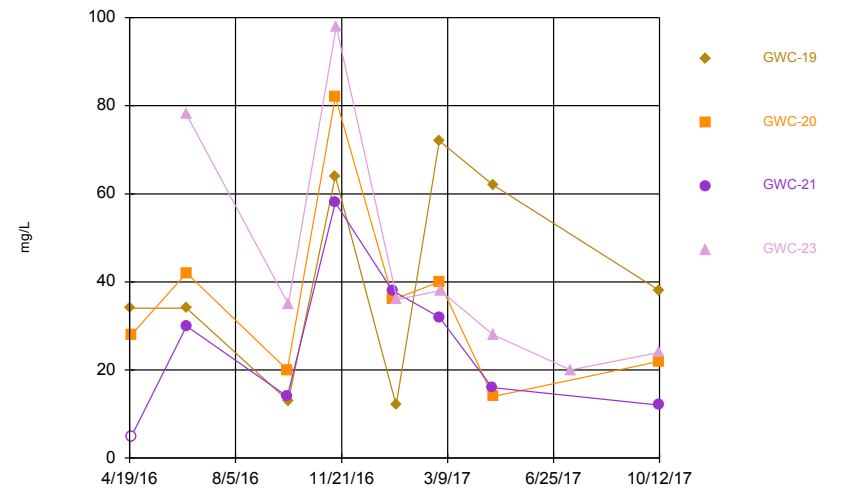
Constituent: Total Dissolved Solids Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/26/2018 1:05 AM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Interwell Prediction Limit

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125 Printed 1/26/2018, 1:14 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GWC-1	0.05	n/a	10/11/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-9	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-10	0.05	n/a	12/12/2017	0.086	Yes	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-11	0.05	n/a	10/11/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-12	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-17	0.05	n/a	10/11/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-18	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-19	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-20	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-21	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-23	0.05	n/a	10/12/2017	0.05ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Calcium (mg/L)	GWC-1	4.39	n/a	10/11/2017	2.4	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-9	4.39	n/a	10/12/2017	0.21	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-10	4.39	n/a	12/12/2017	23	Yes	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-11	4.39	n/a	12/13/2017	11	Yes	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-12	4.39	n/a	10/12/2017	0.76	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-17	4.39	n/a	10/11/2017	2.1	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-18	4.39	n/a	12/13/2017	12	Yes	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-19	4.39	n/a	12/12/2017	9.1	Yes	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-20	4.39	n/a	10/12/2017	1.7	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-21	4.39	n/a	10/12/2017	1.1	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-23	4.39	n/a	10/12/2017	1.5	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-1	9.4	n/a	10/11/2017	7	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-9	9.4	n/a	12/12/2017	10	Yes	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-10	9.4	n/a	10/12/2017	6	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-11	9.4	n/a	10/11/2017	4.5	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-12	9.4	n/a	10/12/2017	3.5	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-17	9.4	n/a	10/11/2017	4.1	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-18	9.4	n/a	10/12/2017	4.6	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-19	9.4	n/a	10/12/2017	8.7	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-20	9.4	n/a	10/12/2017	9.1	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-21	9.4	n/a	10/12/2017	6.1	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-23	9.4	n/a	10/12/2017	4.3	No	72	0	n/a	0.000...	NP (normality) 1 of 2
Fluoride (mg/L)	GWC-1	0.2	n/a	10/11/2017	0.2ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-9	0.2	n/a	10/12/2017	0.2ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-10	0.2	n/a	10/12/2017	0.18	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-11	0.2	n/a	12/13/2017	0.48	Yes	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-12	0.2	n/a	10/12/2017	0.2ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-17	0.2	n/a	10/11/2017	0.11	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-18	0.2	n/a	12/13/2017	0.61	Yes	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-19	0.2	n/a	10/12/2017	0.087	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-20	0.2	n/a	10/12/2017	0.2ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-21	0.2	n/a	10/12/2017	0.2ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-23	0.2	n/a	10/12/2017	0.2ND	No	72	87.5	n/a	0.000...	NP (NDs) 1 of 2
pH (SU)	GWC-1	5.806	4.552	10/17/2017	5.25	No	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-9	5.806	4.552	10/17/2017	4.85	No	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-10	5.806	4.552	10/17/2017	6.11	Yes	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-11	5.806	4.552	10/17/2017	6.35	Yes	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-12	5.806	4.552	10/17/2017	5.03	No	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-17	5.806	4.552	10/17/2017	5.23	No	72	0	No	0.000342	Param 1 of 2

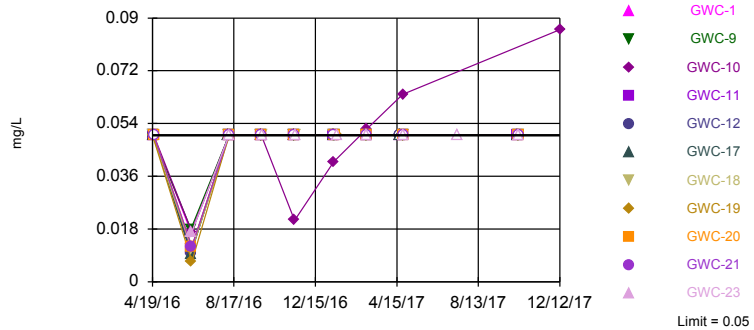
Interwell Prediction Limit

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125 Printed 1/26/2018, 1:14 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>
pH (SU)	GWC-18	5.806	4.552	10/17/2017	6.53	Yes	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-19	5.806	4.552	10/17/2017	5.68	No	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-20	5.806	4.552	10/17/2017	4.97	No	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-21	5.806	4.552	10/17/2017	4.89	No	72	0	No	0.000342	Param 1 of 2
pH (SU)	GWC-23	5.806	4.552	10/17/2017	5.37	No	72	0	No	0.000342	Param 1 of 2
Total Dissolved Solids (mg/L)	GWC-1	67	n/a	10/11/2017	54	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-9	67	n/a	10/12/2017	20	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-10	67	n/a	12/12/2017	150	Yes	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-11	67	n/a	12/13/2017	68	Yes	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-12	67	n/a	10/12/2017	12	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-17	67	n/a	10/11/2017	48	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-18	67	n/a	10/12/2017	54	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-19	67	n/a	10/12/2017	38	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-20	67	n/a	10/12/2017	22	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-21	67	n/a	10/12/2017	12	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	GWC-23	67	n/a	10/12/2017	24	No	72	19.44	n/a	0.000...	NP (normality) 1 of 2

Exceeds Limit: GWC-10

Prediction Limit
Interwell Non-parametric

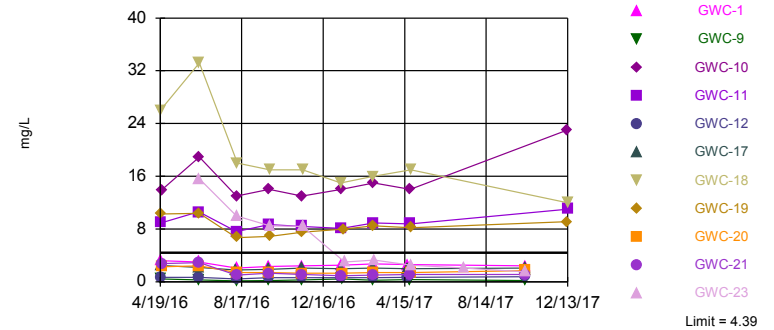


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 72 background values. 87.5% NDs. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Boron Analysis Run 1/26/2018 1:13 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,FI,pH,TD
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Exceeds Limit: GWC-10, GWC-11, GWC-18, GWC-19

Prediction Limit
Interwell Non-parametric

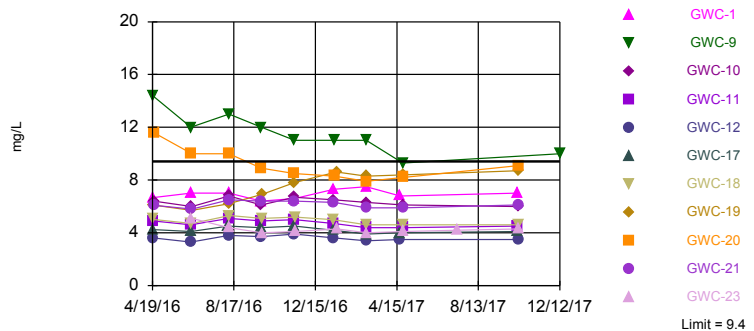


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Calcium Analysis Run 1/26/2018 1:13 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,FI,pH,T
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Exceeds Limit: GWC-9

Prediction Limit
Interwell Non-parametric

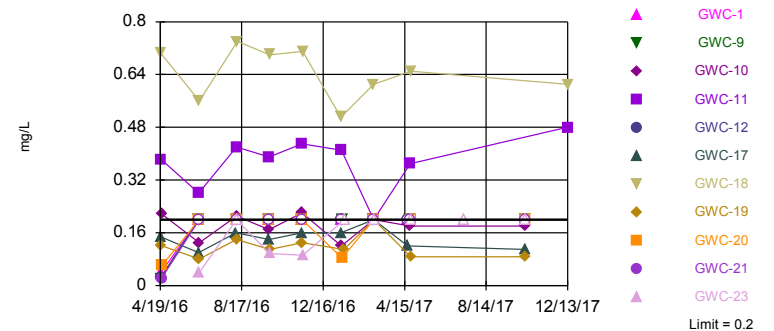


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Chloride Analysis Run 1/26/2018 1:13 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,FI,pH,T
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Exceeds Limit: GWC-11, GWC-18

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 72 background values. 87.5% NDs. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Fluoride Analysis Run 1/26/2018 1:13 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,FI,pH,T
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,Fl,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

GWC-23

4/19/2016	
4/20/2016	
4/21/2016	
6/14/2016	
6/15/2016	
6/16/2016	0.017 (J)
8/9/2016	
8/10/2016	<0.05
8/11/2016	
9/26/2016	
9/27/2016	
9/28/2016	<0.05
11/14/2016	
11/15/2016	
11/16/2016	<0.05
1/10/2017	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	<0.05
2/28/2017	
3/1/2017	
3/2/2017	<0.05
4/19/2017	
4/20/2017	
4/24/2017	
4/25/2017	<0.05
7/13/2017	<0.05
10/10/2017	
10/11/2017	
10/12/2017	<0.05
12/12/2017	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-9	GWA-3 (bg)	GWC-18	GWC-19	GWA-2 (bg)	GWA-14 (bg)	GWC-12	GWC-17	GWA-16 (bg)
4/19/2016	0.431 (J)	1.13	26	10.3	0.485 (J)				
4/20/2016						0.686	0.69	2.48	0.472 (J)
4/21/2016									
6/14/2016		1			0.72	0.62			
6/15/2016	0.27 (J)						0.69	2.2	0.42 (J)
6/16/2016			33.2	10.4					
8/9/2016		0.71			0.24 (J)	0.39		1.8	0.19 (J)
8/10/2016	0.13 (J)			6.7			0.45		
8/11/2016			18						
9/26/2016					0.48				
9/27/2016	0.21 (J)	0.77				0.52	0.61	1.9	0.39
9/28/2016			17	6.9					
11/14/2016		0.75							
11/15/2016	0.27			7.5	0.54	0.5	0.61	2.1	0.39
11/16/2016			17						
1/10/2017		0.73			0.62				
1/11/2017			15			0.47		2	0.36
1/12/2017							0.6		
1/13/2017	0.41								
1/16/2017				8					
1/17/2017									
2/28/2017		0.76			0.91	0.47			
3/1/2017	0.25		16	8.5			0.61	2.1	0.38
3/2/2017									
4/19/2017		0.69			0.75				
4/20/2017						0.5	0.65	2	0.41
4/24/2017	0.34								
4/25/2017			17	8.2					
7/13/2017									
10/10/2017					0.54				
10/11/2017		0.73				0.49		2.1	0.4
10/12/2017	0.21 (J)						0.76		
12/12/2017				9.1 (R)					
12/13/2017			12 (R)						

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-4A (bg)	GWA-13 (bg)	GWC-5 (bg)	GWC-11	GWC-1	GWC-15 (bg)	GWC-20	GWC-21	GWC-10
4/19/2016									
4/20/2016	1.12	0.389 (J)	4.39	8.94	3.22				
4/21/2016						0.686	2.29	2.78	13.9
6/14/2016	1.1	0.37 (J)	2.4						
6/15/2016				10.6	3	0.61			
6/16/2016							2.4	2.9	18.9
8/9/2016		0.14 (J)	2			0.21 (J)			
8/10/2016				7.6	2.1		1.4	0.99	13
8/11/2016	1.9								
9/26/2016									
9/27/2016	3.4	0.33	2.9	8.7	2.3	0.4	1.4	1.3	14
9/28/2016									
11/14/2016	3.1								
11/15/2016		0.28	2.5	8.4	2.4	0.35	1.3	1.1	13
11/16/2016									
1/10/2017	1.5								
1/11/2017			2.5			0.34			
1/12/2017		0.37		8.1	2.5			0.93	14
1/13/2017							1.3		
1/16/2017									
1/17/2017									
2/28/2017	1.1	0.26	2.7			0.37			
3/1/2017				8.9	2.7		1.4	1	15
3/2/2017									
4/19/2017									
4/20/2017	0.98	0.27	2.8		2.6	0.43			
4/24/2017				8.8				1.1	14
4/25/2017							1.4		
7/13/2017									
10/10/2017	0.8								
10/11/2017		0.3	3.3		2.4	0.41			
10/12/2017							1.7	1.1	
12/12/2017									23 (R)
12/13/2017				11 (R)					

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

GWC-23

4/19/2016	
4/20/2016	
4/21/2016	
6/14/2016	
6/15/2016	
6/16/2016	15.6
8/9/2016	
8/10/2016	10
8/11/2016	
9/26/2016	
9/27/2016	
9/28/2016	8.5
11/14/2016	
11/15/2016	
11/16/2016	8.4
1/10/2017	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	3
2/28/2017	
3/1/2017	
3/2/2017	3.3
4/19/2017	
4/20/2017	
4/24/2017	
4/25/2017	2.5
7/13/2017	2.1
10/10/2017	
10/11/2017	
10/12/2017	1.5
12/12/2017	
12/13/2017	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

GWC-23

4/19/2016	
4/20/2016	
4/21/2016	
6/14/2016	
6/15/2016	
6/16/2016	5.1 (B)
8/9/2016	
8/10/2016	4.4
8/11/2016	
9/26/2016	
9/27/2016	
9/28/2016	4
11/14/2016	
11/15/2016	
11/16/2016	4.1
1/10/2017	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	4.3
2/28/2017	
3/1/2017	
3/2/2017	4
4/19/2017	
4/20/2017	
4/24/2017	
4/25/2017	4.1
7/13/2017	4.2
10/10/2017	
10/11/2017	
10/12/2017	4.3
12/12/2017	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-9	GWA-3 (bg)	GWC-18	GWC-19	GWA-2 (bg)	GWA-14 (bg)	GWC-12	GWC-17	GWA-16 (bg)
4/19/2016	0.02 (J)	0.022 (J)	0.706	0.122 (J)	0.03 (J)				
4/20/2016						0.021 (J)	0.026 (J)	0.147 (J)	0.022 (J)
4/21/2016									
6/14/2016		<0.2			0.02 (J)	<0.2			
6/15/2016	<0.2						<0.2	0.1 (J)	<0.2
6/16/2016			0.56	0.08 (J)					
8/9/2016		<0.2			<0.2	<0.2		0.16 (J)	<0.2
8/10/2016	<0.2			0.14 (J)			<0.2		
8/11/2016			0.74						
9/26/2016					<0.2				
9/27/2016	<0.2	<0.2				<0.2	<0.2	0.14 (J)	<0.2
9/28/2016			0.7	0.11 (J)					
11/14/2016		<0.2							
11/15/2016	<0.2			0.13 (J)	<0.2	<0.2	<0.2	0.16 (J)	<0.2
11/16/2016			0.71						
1/10/2017		<0.2			<0.2				
1/11/2017			0.51			<0.2		0.16 (J)	<0.2
1/12/2017							<0.2		
1/13/2017	<0.2								
1/16/2017				0.11 (J)					
1/17/2017									
2/28/2017		<0.2 (*)			<0.2 (*)	<0.2 (*)			
3/1/2017	<0.2 (*)		0.61 (B)	<0.2 (*)			<0.2 (*)	<0.2 (*)	<0.2 (*)
3/2/2017									
4/19/2017		<0.2			<0.2				
4/20/2017						<0.2	<0.2	0.12 (J)	<0.2
4/24/2017	<0.2								
4/25/2017			0.65	0.087 (J)					
7/13/2017									
10/10/2017					<0.2				
10/11/2017		<0.2				<0.2		0.11 (J)	<0.2
10/12/2017	<0.2			0.087 (J)			<0.2		
12/13/2017			0.61 (R)						

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-4A (bg)	GWA-13 (bg)	GWC-5 (bg)	GWC-11	GWC-1	GWC-15 (bg)	GWC-20	GWC-21	GWC-10
4/19/2016									
4/20/2016	0.028 (J)	0.018 (J)	0.032 (J)	0.383	0.04 (J)				
4/21/2016						0.019 (J)	0.06 (J)	0.022 (J)	0.217 (J)
6/14/2016	<0.2	<0.2	<0.2						
6/15/2016				0.28 (J)	<0.2	<0.2			
6/16/2016							<0.2	<0.2	0.13 (J)
8/9/2016		<0.2	<0.2			<0.2			
8/10/2016				0.42	<0.2		<0.2	<0.2	0.21
8/11/2016	<0.2								
9/26/2016									
9/27/2016	<0.2	<0.2	<0.2	0.39	<0.2	<0.2	<0.2	<0.2	0.17 (J)
9/28/2016									
11/14/2016	<0.2								
11/15/2016		<0.2	<0.2	0.43	<0.2	<0.2	<0.2	<0.2	0.22
11/16/2016									
1/10/2017	<0.2								
1/11/2017			<0.2			<0.2			
1/12/2017		<0.2		0.41	<0.2			<0.2	0.12 (J)
1/13/2017							0.083 (J)		
1/16/2017									
1/17/2017									
2/28/2017	<0.2 (*)	<0.2 (*)	<0.2 (*)			<0.2 (*)			
3/1/2017				<0.2 (*)	<0.2 (*)		<0.2 (*)	<0.2 (*)	<0.2 (*)
3/2/2017									
4/19/2017									
4/20/2017	<0.2	<0.2	<0.2		<0.2	<0.2			
4/24/2017				0.37				<0.2	0.18 (J)
4/25/2017							<0.2		
7/13/2017									
10/10/2017	<0.2								
10/11/2017		<0.2	<0.2		<0.2	<0.2			
10/12/2017							<0.2	<0.2	0.18 (J)
12/13/2017				0.48 (R)					

Prediction Limit

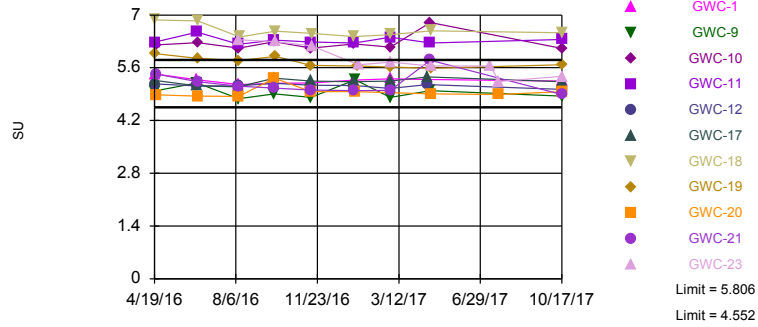
Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Ci,Fl,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

GWC-23

4/19/2016	
4/20/2016	
4/21/2016	
6/14/2016	
6/15/2016	
6/16/2016	0.04 (J)
8/9/2016	
8/10/2016	<0.2
8/11/2016	
9/26/2016	
9/27/2016	
9/28/2016	0.097 (J)
11/14/2016	
11/15/2016	
11/16/2016	0.092 (J)
1/10/2017	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	<0.2
2/28/2017	
3/1/2017	
3/2/2017	<0.2 (*)
4/19/2017	
4/20/2017	
4/24/2017	
4/25/2017	<0.2
7/13/2017	<0.2
10/10/2017	
10/11/2017	
10/12/2017	<0.2
12/13/2017	

Exceeds Limits: GWC-10, GWC-11, GWC-18

Prediction Limit
Interwell Parametric

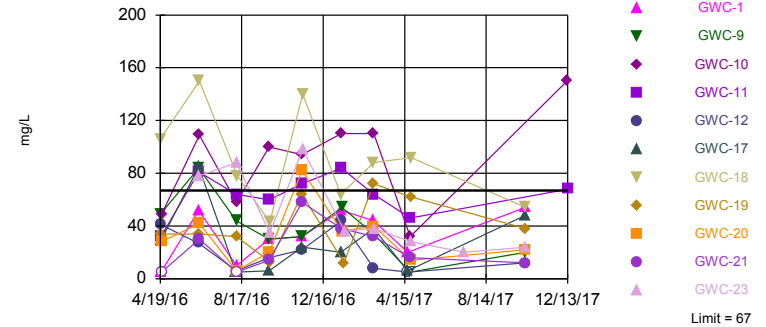


Background Data Summary: Mean=5.179, Std. Dev.=0.311, n=72. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9649, critical = 0.954. Kappa = 2.018 (c=7, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.000342. Comparing 11 points to limit.

Constituent: pH Analysis Run 1/26/2018 1:13 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,FI,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Hollow symbols indicate censored values.
Exceeds Limit: GWC-10, GWC-11

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. 19.44% NDs. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 1:13 AM View: 2. Interwell UPL - All Wells - B,
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,Fl,pH,TDS

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWA-3 (bg)	GWC-19	GWC-18	GWC-9	GWA-2 (bg)	GWC-17	GWA-14 (bg)	GWC-12	GWA-16 (bg)
4/19/2016	4.92	5.98	6.87	4.98	4.99				
4/20/2016						5.26	5.41	5.17	5.16
4/21/2016									
6/14/2016	4.89				4.98				
6/15/2016				5.2		5.12	5.74	5.12	5.04
6/16/2016		5.85	6.84						
8/9/2016	4.92				4.72	5.09	5.41		5.07
8/10/2016		5.79		4.78				5.12	
8/11/2016			6.42						
9/26/2016					4.74				
9/27/2016	5.25			4.91		5.32	5.42	5.19	5.11
9/28/2016		5.9	6.57						
11/14/2016	4.96								
11/15/2016		5.66		4.81	4.8	5.25	5.33	5.14	5.11
11/16/2016			6.51						
1/10/2017	4.21				4.59				
1/11/2017			6.43			5.23	5.32		5.07
1/12/2017								5.13	
1/13/2017				5.28					
1/16/2017		5.65							
1/17/2017									
2/28/2017	4.95				4.91		5.32		
3/1/2017		5.62	6.48	4.81		5.25		5.05	5.14
3/2/2017									
4/19/2017	5.12				4.98				
4/20/2017						5.36	5.31	5.15	5.05
4/24/2017				4.99					
4/25/2017		5.59	6.58						
7/13/2017									
7/25/2017									
10/17/2017	4.96	5.68	6.53	4.85	4.93	5.23	5.27	5.03	5.17

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,Fl,pH,TDS
 Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-4A (bg)	GWA-13 (bg)	GWC-5 (bg)	GWC-1	GWC-11	GWC-10	GWC-15 (bg)	GWC-20	GWC-21
4/19/2016									
4/20/2016	4.9	5.16	5.85	5.43	6.28				
4/21/2016						6.21	5.18	4.88	5.43
6/14/2016	4.9		5.53						
6/15/2016		5.35		5.28	6.55		5.47		
6/16/2016						6.27		4.85	5.23
8/9/2016		4.89	5.44				5.01		
8/10/2016				5.15	6.22	6.12		4.84	5.11
8/11/2016	5.37								
9/26/2016									
9/27/2016	5.89	5.02	5.59	5.19	6.33	6.29	5.22	5.32	5.06
9/28/2016									
11/14/2016	5.94								
11/15/2016		5.04	5.58	5.2	6.28	6.12	5.07	4.97	5.01
11/16/2016									
1/10/2017	5.44								
1/11/2017			5.56				5		
1/12/2017		5.19		5.27	6.26	6.23			4.99
1/13/2017								4.97	
1/16/2017									
1/17/2017									
2/28/2017	5.49	4.86	5.53				5.1		
3/1/2017				5.31	6.41	6.15			5
3/2/2017									
4/19/2017									
4/20/2017	5.51	5.01	5.63	5.29			5.12		
4/24/2017					6.26	6.8			5.8
4/25/2017								4.91	
7/13/2017									
7/25/2017								4.89	
10/17/2017	5.28	4.93	5.62	5.25	6.35	6.11	4.95	4.97	4.89

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,Fl,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

GWC-23

4/19/2016	
4/20/2016	
4/21/2016	
6/14/2016	
6/15/2016	
6/16/2016	
8/9/2016	
8/10/2016	6.34
8/11/2016	
9/26/2016	
9/27/2016	
9/28/2016	6.29
11/14/2016	
11/15/2016	
11/16/2016	6.18
1/10/2017	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	5.68
2/28/2017	
3/1/2017	
3/2/2017	5.75
4/19/2017	
4/20/2017	
4/24/2017	
4/25/2017	5.65
7/13/2017	5.65
7/25/2017	5.24
10/17/2017	5.37

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,Fl,pH,TDS

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-4A (bg)	GWA-13 (bg)	GWC-5 (bg)	GWC-11	GWC-1	GWC-15 (bg)	GWC-20	GWC-21	GWC-10
4/19/2016									
4/20/2016	<5	<5	<5	32	<5				
4/21/2016						<5	28	<5	49
6/14/2016	67	47	62						
6/15/2016				81	52	58			
6/16/2016							42	30	109
8/9/2016		10	6			6			
8/10/2016				64	10		6	<5	58
8/11/2016	<5								
9/26/2016									
9/27/2016	28	16	10	60	30	16	20	14	100
9/28/2016									
11/14/2016	48								
11/15/2016		4 (J)	32	72	32	18	82	58	94
11/16/2016									
1/10/2017	22								
1/11/2017			12			8			
1/12/2017		26		84	52			38	110
1/13/2017							36		
1/16/2017									
1/17/2017									
2/28/2017	32	6	<5			4 (J)			
3/1/2017				64	44		40	32	110
3/2/2017									
4/19/2017									
4/20/2017	20	<5	34		20	10			
4/24/2017				46				16	32
4/25/2017							14		
7/13/2017									
10/10/2017	24								
10/11/2017		32	40		54	26			
10/12/2017							22	12	
12/12/2017									150 (R)
12/13/2017				68 (R)					

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 1:14 AM View: 2. Interwell UPL - All Wells - B,Ca,Cl,Fl,pH,TDS
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

GWC-23

4/19/2016	
4/20/2016	
4/21/2016	
6/14/2016	
6/15/2016	
6/16/2016	78
8/9/2016	
8/10/2016	88
8/11/2016	
9/26/2016	
9/27/2016	
9/28/2016	35
11/14/2016	
11/15/2016	
11/16/2016	98
1/10/2017	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	36
2/28/2017	
3/1/2017	
3/2/2017	38
4/19/2017	
4/20/2017	
4/24/2017	
4/25/2017	28
7/13/2017	20
10/10/2017	
10/11/2017	
10/12/2017	24
12/12/2017	
12/13/2017	

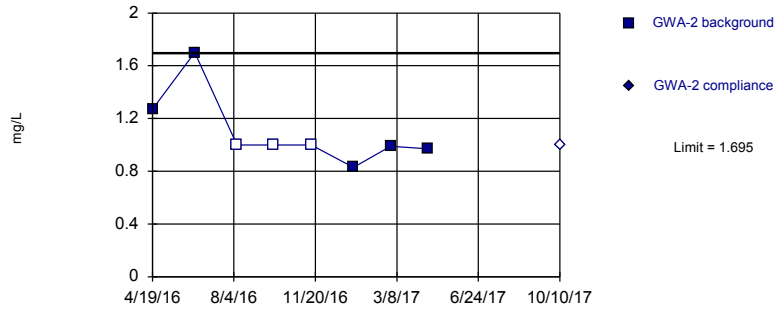
Intrawell Prediction Limit

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125 Printed 1/26/2018, 1:11 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>
Sulfate (mg/L)	GWA-2	1.695	n/a	10/10/2017	1ND	No	8	37.5	sqrt(x)	0.000...	Param 1 of 3
Sulfate (mg/L)	GWA-3	1.232	n/a	10/11/2017	1ND	No	8	37.5	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-4A	9.846	n/a	10/10/2017	7.3	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-5	1	n/a	10/11/2017	1ND	No	8	75	n/a	0.005912	NP (NDs) 1 of 3
Sulfate (mg/L)	GWA-13	1	n/a	10/11/2017	1ND	No	8	75	n/a	0.005912	NP (NDs) 1 of 3
Sulfate (mg/L)	GWA-14	6.578	n/a	10/11/2017	1ND	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-15	1	n/a	10/11/2017	1ND	No	8	75	n/a	0.005912	NP (NDs) 1 of 3
Sulfate (mg/L)	GWA-16	1	n/a	10/11/2017	1ND	No	8	75	n/a	0.005912	NP (NDs) 1 of 3
Sulfate (mg/L)	GWC-1	2.566	n/a	10/11/2017	1.3	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-9	4.802	n/a	10/12/2017	2.3	No	8	25	sqrt(x)	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-10	4.778	n/a	10/12/2017	2.7	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-11	5.685	n/a	10/11/2017	4.5	No	8	0	sqrt(x)	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-12	1	n/a	10/12/2017	1ND	No	8	75	n/a	0.005912	NP (NDs) 1 of 3
Sulfate (mg/L)	GWC-17	2.991	n/a	10/11/2017	1ND	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-18	5.478	n/a	12/13/2017	4	No	7	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-19	3.018	n/a	10/12/2017	1.7	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-20	5.654	n/a	10/12/2017	1.1	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-21	2.063	n/a	10/12/2017	0.72	No	8	0	No	0.000...	Param 1 of 3
Sulfate (mg/L)	GWC-23	9.2	n/a	10/12/2017	2.1	No	8	0	n/a	0.005912	NP (normality) 1 of 3

Within Limit

Prediction Limit
Intrawell Parametric

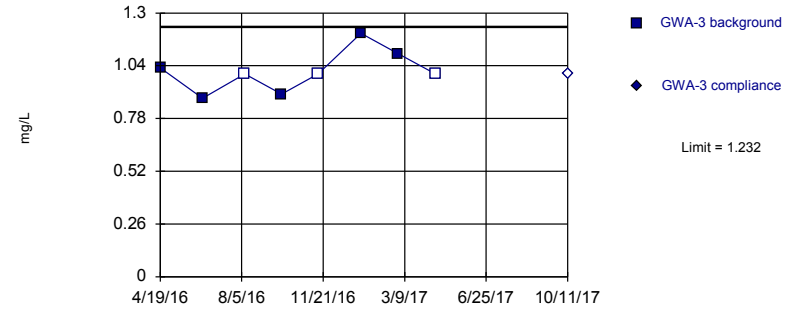


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=1.027, Std. Dev.=0.122, n=8, 37.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7755, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:10 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

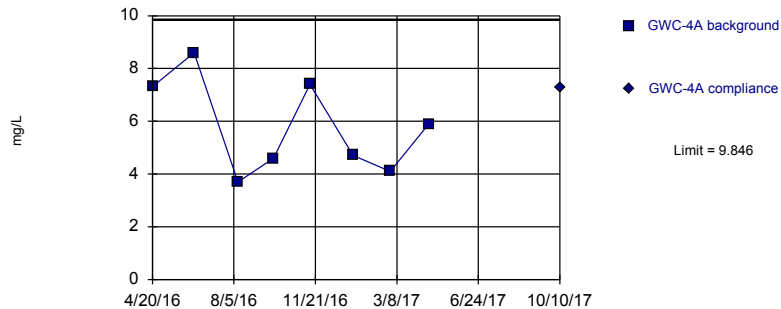


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.9725, Std. Dev.=0.115, n=8, 37.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9315, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:10 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

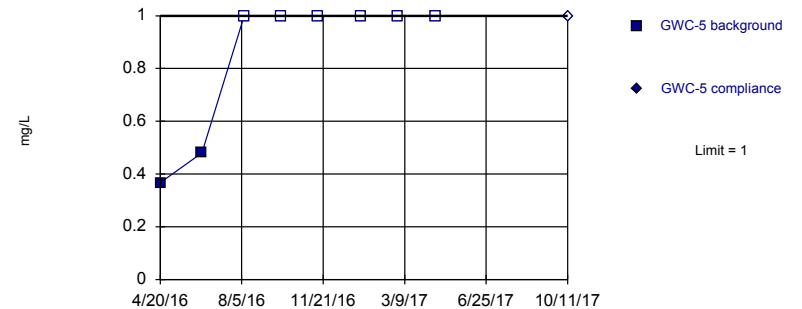


Background Data Summary: Mean=5.789, Std. Dev.=1.798, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9142, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:10 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3).

Constituent: Sulfate Analysis Run 1/26/2018 1:10 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWA-2	GWA-2
4/19/2016	1.27	
6/14/2016	1.7	
8/9/2016	<1	
9/26/2016	<1	
11/15/2016	<1	
1/10/2017	0.83 (J)	
2/28/2017	0.99 (J)	
4/19/2017	0.97 (J)	
10/10/2017		<1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWA-3	GWA-3
4/19/2016	1.03	
6/14/2016	0.88 (J)	
8/9/2016	<1	
9/27/2016	0.9 (J)	
11/14/2016	<1	
1/10/2017	1.2	
2/28/2017	1.1	
4/19/2017	<1	
10/11/2017		<1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-4A	GWC-4A
4/20/2016	7.31	
6/14/2016	8.6	
8/11/2016	3.7	
9/27/2016	4.6	
11/14/2016	7.4	
1/10/2017	4.7	
2/28/2017	4.1	
4/20/2017	5.9	
10/10/2017		7.3

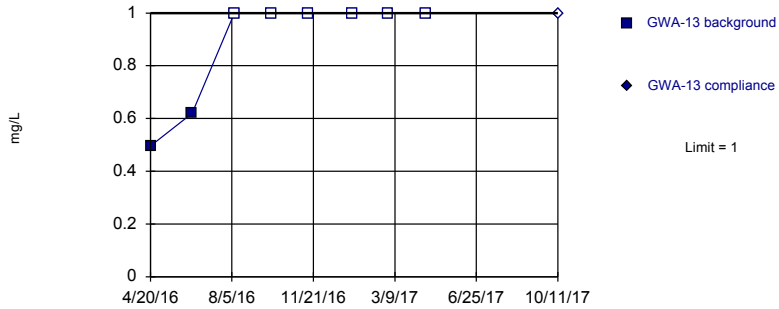
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-5	GWC-5
4/20/2016	0.367 (J)	
6/14/2016	0.48 (J)	
8/9/2016	<1	
9/27/2016	<1	
11/15/2016	<1	
1/11/2017	<1	
2/28/2017	<1	
4/20/2017	<1	
10/11/2017		<1

Within Limit

Prediction Limit
Intrawell Non-parametric

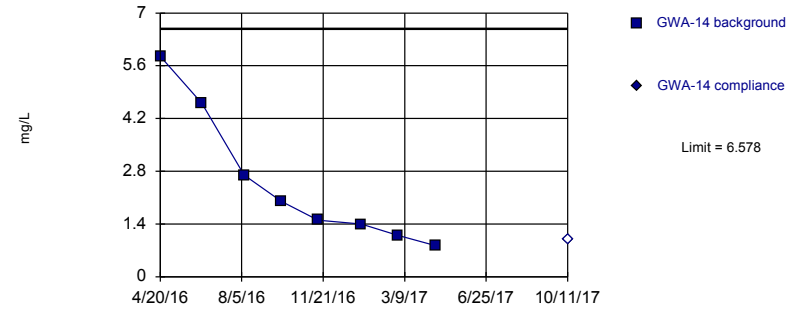


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3).

Constituent: Sulfate Analysis Run 1/26/2018 1:10 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

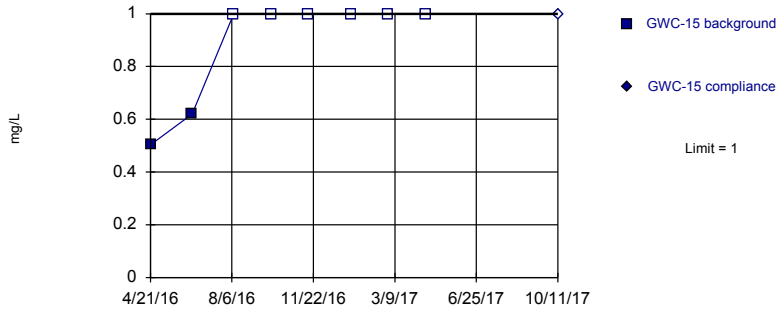


Background Data Summary: Mean=2.496, Std. Dev.=1.809, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8473, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Non-parametric

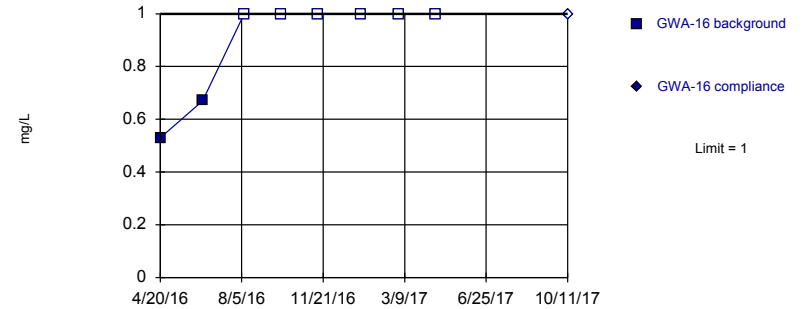


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3).

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3).

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWA-13	GWA-13
4/20/2016	0.496 (J)	
6/14/2016	0.62 (J)	
8/9/2016	<1 (F1)	
9/27/2016	<1	
11/15/2016	<1	
1/12/2017	<1	
2/28/2017	<1	
4/20/2017	<1	
10/11/2017		<1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWA-14	GWA-14
4/20/2016	5.85	
6/14/2016	4.6	
8/9/2016	2.7	
9/27/2016	2	
11/15/2016	1.5	
1/11/2017	1.4	
2/28/2017	1.1	
4/20/2017	0.82 (J)	
10/11/2017		<1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-15	GWC-15
4/21/2016	0.503 (J)	
6/15/2016	0.62 (J)	
8/9/2016	<1	
9/27/2016	<1	
11/15/2016	<1	
1/11/2017	<1	
2/28/2017	<1	
4/20/2017	<1	
10/11/2017		<1

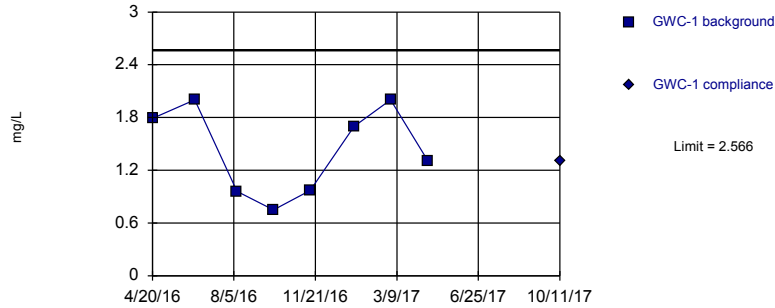
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWA-16	GWA-16
4/20/2016	0.53 (J)	
6/15/2016	0.67 (J)	
8/9/2016	<1	
9/27/2016	<1	
11/15/2016	<1	
1/11/2017	<1	
3/1/2017	<1	
4/20/2017	<1	
10/11/2017		<1

Within Limit

Prediction Limit
Intrawell Parametric

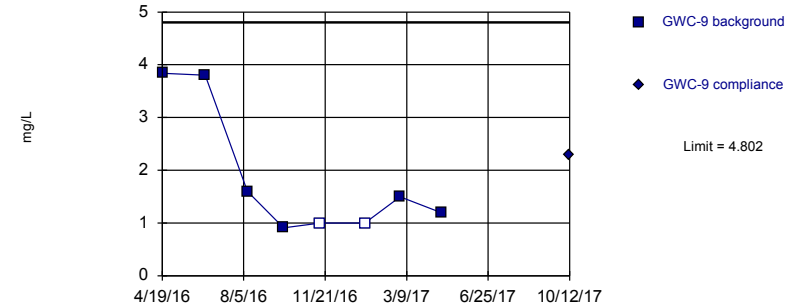


Background Data Summary: Mean=1.434, Std. Dev.=0.502, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8871, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

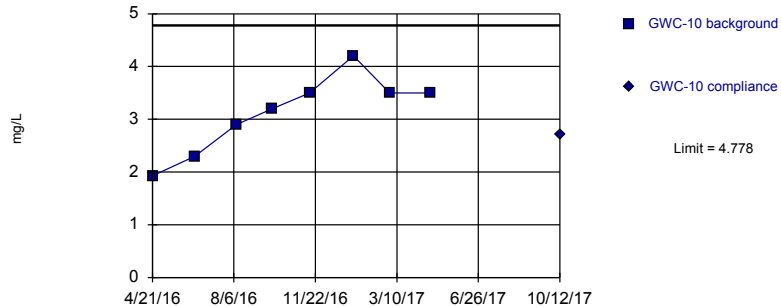


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=1.294, Std. Dev.=0.3976, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7687, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

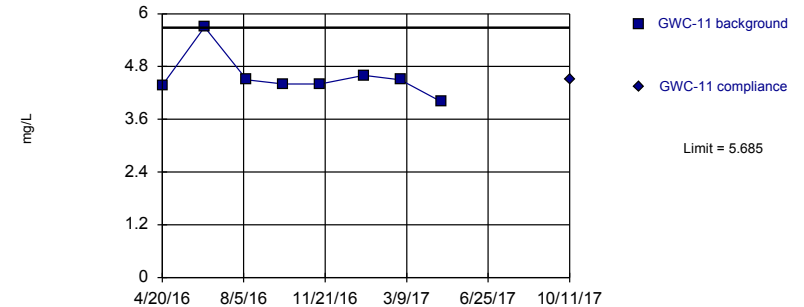


Background Data Summary: Mean=3.129, Std. Dev.=0.7312, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9393, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=2.133, Std. Dev.=0.1116, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7586, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-1	GWC-1
4/20/2016	1.79	
6/15/2016	2	
8/10/2016	0.96 (J)	
9/27/2016	0.75 (J)	
11/15/2016	0.97 (J)	
1/12/2017	1.7	
3/1/2017	2	
4/20/2017	1.3	
10/11/2017		1.3

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-9	GWC-9
4/19/2016	3.84	
6/15/2016	3.8	
8/10/2016	1.6	
9/27/2016	0.91 (J)	
11/15/2016	<1	
1/13/2017	<1	
3/1/2017	1.5	
4/24/2017	1.2	
10/12/2017		2.3

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-10	GWC-10
4/21/2016	1.93	
6/16/2016	2.3	
8/10/2016	2.9	
9/27/2016	3.2	
11/15/2016	3.5	
1/12/2017	4.2	
3/1/2017	3.5	
4/24/2017	3.5	
10/12/2017		2.7

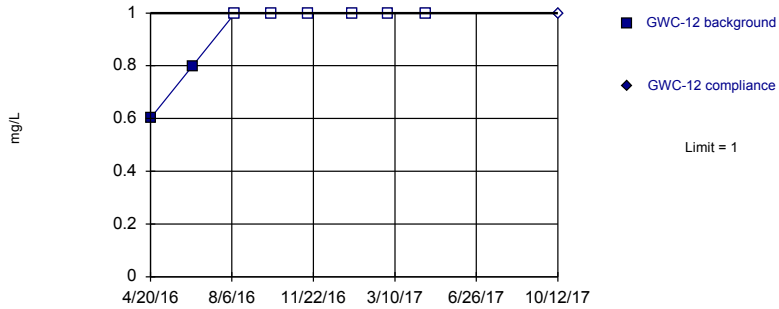
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. Inrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-11	GWC-11
4/20/2016	4.37	
6/15/2016	5.7	
8/10/2016	4.5	
9/27/2016	4.4	
11/15/2016	4.4	
1/12/2017	4.6	
3/1/2017	4.5	
4/24/2017	4	
10/11/2017		4.5

Within Limit

Prediction Limit
Intrawell Non-parametric

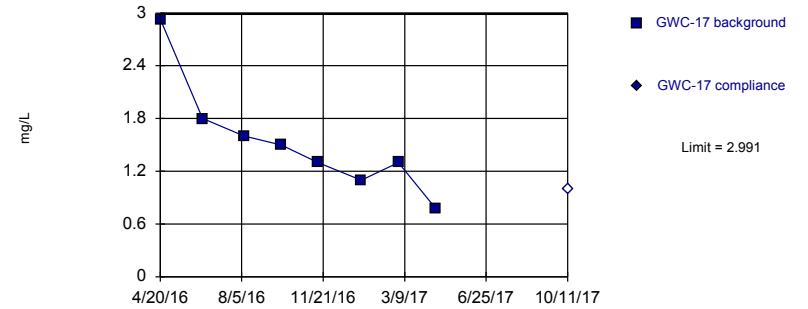


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3).

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

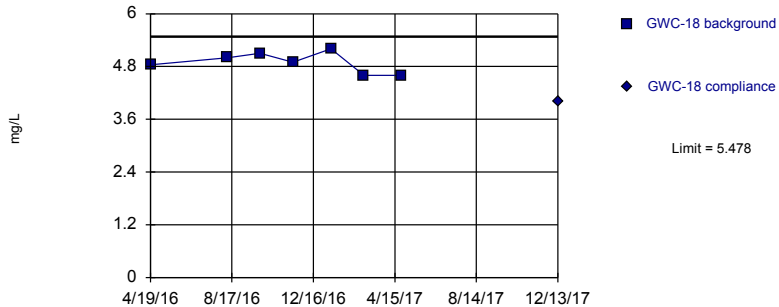


Background Data Summary: Mean=1.538, Std. Dev.=0.6444, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8722, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

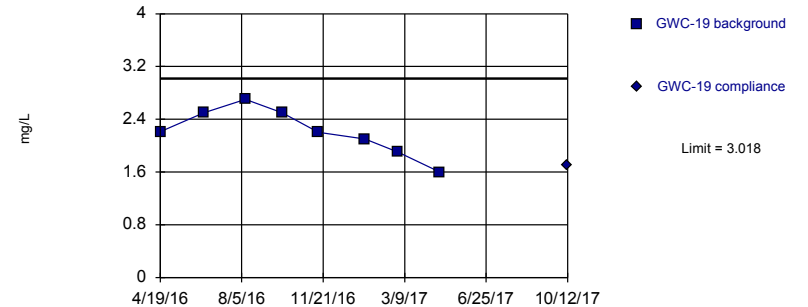


Background Data Summary: Mean=4.891, Std. Dev.=0.2321, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9293, critical = 0.73. Kappa = 2.527 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=2.214, Std. Dev.=0.3563, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9647, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-12	GWC-12
4/20/2016	0.601 (J)	
6/15/2016	0.8 (J)	
8/10/2016	<1	
9/27/2016	<1	
11/15/2016	<1	
1/12/2017	<1	
3/1/2017	<1	
4/20/2017	<1	
10/12/2017		<1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-17	GWC-17
4/20/2016	2.93	
6/15/2016	1.8	
8/9/2016	1.6	
9/27/2016	1.5	
11/15/2016	1.3	
1/11/2017	1.1	
3/1/2017	1.3	
4/20/2017	0.77 (J)	
10/11/2017		<1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-18	GWC-18
4/19/2016	4.84	
6/16/2016	9 (o)	
8/11/2016	5	
9/28/2016	5.1	
11/16/2016	4.9	
1/11/2017	5.2	
3/1/2017	4.6	
4/25/2017	4.6	
12/13/2017		4 (R)

Prediction Limit

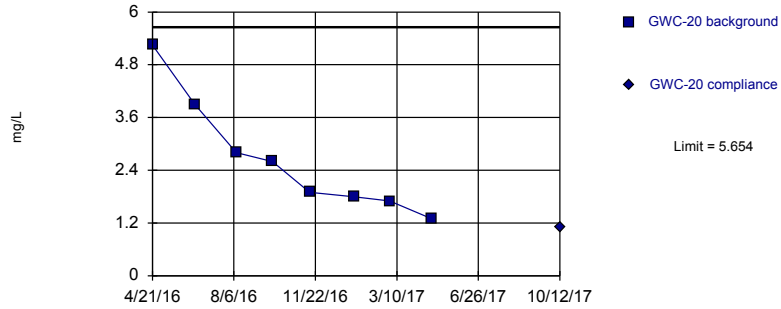
Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-19	GWC-19
4/19/2016	2.21	
6/16/2016	2.5	
8/10/2016	2.7	
9/28/2016	2.5	
11/15/2016	2.2	
1/16/2017	2.1	
3/1/2017	1.9	
4/25/2017	1.6	
10/12/2017		1.7

Within Limit

Prediction Limit
Intrawell Parametric

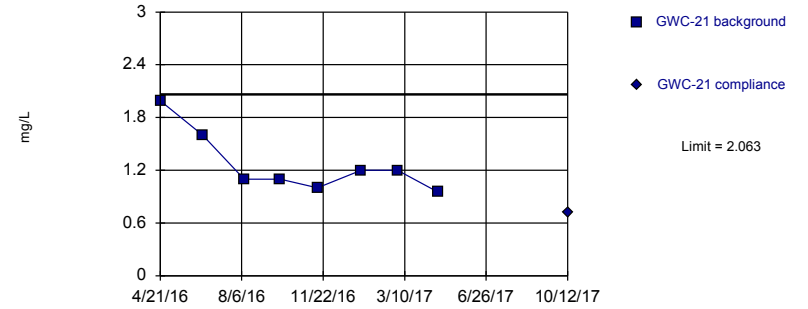


Background Data Summary: Mean=2.656, Std. Dev.=1.329, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8814, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Within Limit

Prediction Limit
Intrawell Parametric

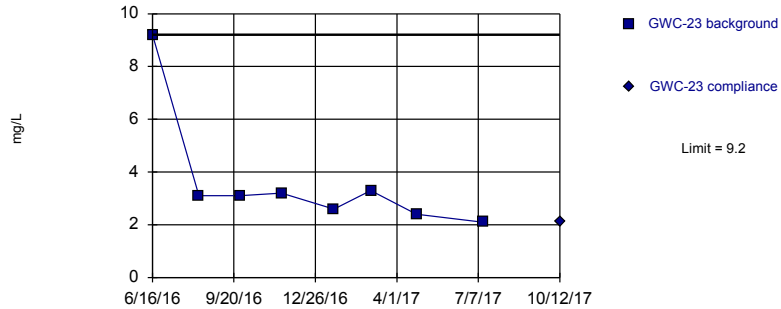


Background Data Summary: Mean=1.268, Std. Dev.=0.3526, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8153, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 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 = 0.01179. Individual comparison alpha = 0.005912 (1 of 3).

Constituent: Sulfate Analysis Run 1/26/2018 1:11 AM View: 3. Intrawell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-20	GWC-20
4/21/2016	5.25	
6/16/2016	3.9	
8/10/2016	2.8	
9/27/2016	2.6	
11/15/2016	1.9	
1/13/2017	1.8	
3/1/2017	1.7	
4/25/2017	1.3	
10/12/2017		1.1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4

Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-21	GWC-21
4/21/2016	1.99	
6/16/2016	1.6	
8/10/2016	1.1	
9/27/2016	1.1	
11/15/2016	1	
1/12/2017	1.2	
3/1/2017	1.2	
4/24/2017	0.95 (J)	
10/12/2017		0.72 (J)

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 1:11 AM View: 3. IntraWell UPL - SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Landfill4 20180125

	GWC-23	GWC-23
6/16/2016	9.2	
8/10/2016	3.1	
9/28/2016	3.1	
11/16/2016	3.2	
1/17/2017	2.6	
3/2/2017	3.3	
4/25/2017	2.4	
7/13/2017	2.1	
10/12/2017		2.1