



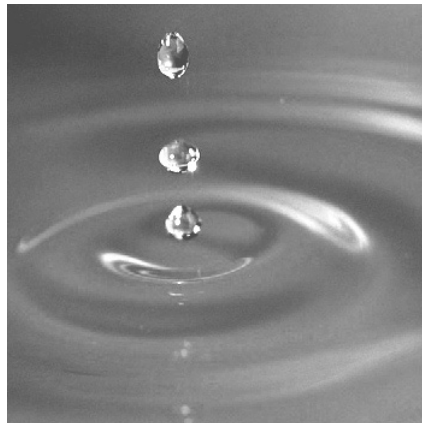
Consulting
Engineers and
Scientists

Georgia Power Company
**2019 Annual Groundwater Monitoring
and Corrective Action Report**

Plant McIntosh Coal Combustion Residuals
Inactive Landfill No. 3
Permit No. 051-008D(L)(I)

Prepared by:
GEI Consultants, Inc.
1375 Peachtree Street, Suite A15
Atlanta, GA 30309

August 2019
Project 1901973



Prepared by: Lauren Coker
Staff Geologist

Reviewed By: Christie Battenhouse, P.G.
Senior Project Manager

Table of Contents

1.	Introduction	1
1.1	Site Description and Background	1
1.2	Regional Geology and Hydrogeologic Setting	1
1.3	Groundwater Monitoring Well Network	2
2.	Groundwater Monitoring Activities	3
2.1	Monitoring Well Installation and Maintenance	3
2.2	Alternate Source Demonstrations	4
2.3	Detection Monitoring	5
	2.3.1 Background Monitoring	5
	2.3.2 Initial Detection Monitoring	5
2.4	Other Sampling	5
3.	Sample Methodology and Analyses	7
3.1	Groundwater Level Measurement	7
3.2	Groundwater Gradient and Flow Velocity	7
3.3	Groundwater Sampling	8
3.4	Laboratory Analyses	9
3.5	Quality Assurance and Quality Control	9
4.	Statistical Analyses	11
4.1	Statistical Methods – Appendix III Parameters	11
4.2	Statistical Methods – State Compliance Parameters	12
4.3	Statistical Analyses Results – Appendix III Parameters	13
4.4	Statistical Analyses Results – State Compliance Parameters	14
4.5	Appendix IV Background Data	14
5.	Monitoring Program Status	15
6.	Conclusions and Future Actions	16
7.	References	17

Table of Contents (continued)

Tables

1. Monitoring Well Network Summary
2. Groundwater Sampling Event Summary for 2016-2019
3. Summary of Background Groundwater Analytical Data
4. Summary of Detection Groundwater Analytical Data
5. Summary of Groundwater Elevations
6. Groundwater Flow Velocity Calculations – 2019

Figures

1. Plant McIntosh – Site Location Map
2. Well Location Map
3. Potentiometric Surface Contour Map, January 2019
4. Potentiometric Surface Contour Map, March 2019

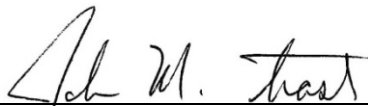
Appendices

- A. ASD
- B. Field Sampling, Laboratory Analytical Data, and Data Validation Reports
- C1. Sanitas™ Outputs for Appendix III Parameters - January 2019
- C2. Sanitas™ Outputs for Appendix III Parameters - March 2019
- D1. Sanitas™ Outputs for State Compliance Parameters - January 2019
- D2. Sanitas™ Outputs for State Compliance Parameters - March 2019

PROFESSIONAL ENGINEER CERTIFICATION

This 2019 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company – Plant McIntosh Inactive Landfill No. 3 has been prepared in accordance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 and by reference, the United States Environmental Protection Agency coal combustion residual rule (40 Code of Federal Regulations (CFR) 257 Subpart D) under the supervision of a qualified groundwater scientist or engineer with GEI Consultants, Inc.

GEI Consultants, Inc. certifies that all state compliance parameters were below the applicable Georgia maximum contaminant levels (MCL).



John M. Trast, P.E.
License No. PE41928



1. Introduction

In accordance with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management 391-3-4-.10 – Coal Combustion Residuals (CCR), GEI Consultants, Inc. (GEI) has prepared this *2019 Annual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company's (GPC's) Plant McIntosh, Coal Combustion By-product Inactive Landfill No. 3 (the Site).

Groundwater monitoring is currently conducted at the Site to comply with Landfill No. 3's Solid Waste permit number 051-008D(L)(I), as issued by the EPD, and in accordance with Georgia EPD Solid Waste Management Rule 391-3-4.14 Groundwater Monitoring and Corrective Action. The landfill is also subject to the Georgia EPD Solid Waste Management Rule 391-3-4-.10 Coal Combustion Residuals, which adopt the United States Environmental Protection Agency (USEPA) coal combustion residual rule (CCR Rule) [40 Code of Federal Regulations (CFR) 257 Subpart D] by reference. This report documents routine groundwater monitoring activities as well as activities completed to establish the detection monitoring program for the Site in accordance with the monitoring requirements of Georgia EPD Rule 391-3-4-4.14.

1.1 Site Description and Background

The plant property is located at 981 Old Augusta Road Central, in southeast Effingham County, Georgia, approximately 4 miles northeast of the city of Rincon, and 20 miles north-northwest of the city of Savannah. The Site received CCR from the generating process but was closed in 2008 and is now inactive.

The plant property is on the west bank of the Savannah River at Big Kiffer Point. The Site is on the southwestern corner of the plant property, approximately 1.5 miles west of the Savannah River and approximately 800 feet south of Lockner Creek (Figure 1).

1.2 Regional Geology and Hydrogeologic Setting

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 (Southern Company Services Earth Science & Environmental Engineering [SCS ES&EE], 2002).

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 the Site as interbedded clays, silts, and sands typical of Coastal Plain sediments.

The uppermost aquifer at the Site is the surficial aquifer, characterized by silty to sandy clays, clayey silts, silty sands, and fine to medium grained sands. Monitoring wells and piezometers were screened in the surficial aquifer between elevation 59 and 15 feet (ft) North American Vertical Datum (NAVD)1988.

1.3 Groundwater Monitoring Well Network

A groundwater monitoring system was installed within the uppermost aquifer at the Site. The monitoring system is designed to monitor groundwater passing the waste boundary of the unit within the uppermost aquifer. Wells were located to serve as upgradient and downgradient monitoring points based on groundwater flow direction relative to constructed waste boundaries (Table 1).

2. Groundwater Monitoring Activities

The following subsections describe monitoring-related activities completed at the Site through Spring 2019. Samples were collected from each well (if adequate groundwater was encountered) in the monitoring system shown on Figure 2. A summary and description of groundwater sampling events completed at the Site through Spring 2019 is shown on Table 2.

2.1 Monitoring Well Installation and Maintenance

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 Georgia Rules for Solid Waste Management Chapter 391-3-4.10.

The certified groundwater monitoring system consists of 18 monitoring wells and three piezometers, as shown on Figure 2. Three groundwater monitoring wells (GWC-1, GWC-2, and GWC-3) were installed at the Site in January 1996. Eleven additional groundwater monitoring wells (GWA-1, GWA-2, GWA-3A, GWA-3B, GWA-4, GWA-5, GWC-4A, GWC-4B, GWC-5, GWC-6, and GWC-7) were installed in May 1998. GWC-7 was replaced with a new well (also called GWC-7) in November 2000, which was renamed as GWA-7 in February 2010 as a part of the Minor Modification Request to the Design and Operation (D&O) plan (GPC, 2010). Two additional monitoring wells (GWA-1A and GWA-2A) were installed in January 2017 as replacement wells for GWA-1 and GWA-2, respectively. In August 2018, three piezometers (PZ-1, PZ-2, and PZ-3) were installed, as well as two additional monitoring wells (GWA-2B and GWA-7A) were installed as potential replacement wells for GWA-2A and GWA-7. Monitoring wells GWA-2B and GWA-7A are proposed as replacement wells for GWA-2/GWA-2A and GWA-7, respectively, in the November 2018 submittal.

GPC is evaluating replacing monitoring wells GWA-3B and GWC-4B, which appear to be screened in a shallow perched zone and therefore, these wells are not considered to be representative of the groundwater conditions at the Site. In addition, GWC-4B has been dry since January 2018. GPC proposes to abandon GWA-3B and GWC-4B. In addition, the screened lithologies for GWA-1 and GWA-2 or its replacement well (GWA-2A) do not appear to be representative of Site groundwater levels. A SCS-contracted driller, with GEI oversight services, installed GWA-2B on August 29, 2018 in the area of GWA-2/GWA-2A to determine if a screened interval can be identified that is more representative of Site groundwater (within the first water-bearing aquifer that is not perched). GPC proposes to

abandon GWA-1, GWA-2, and GWA-2A. Finally, due to the consistent high turbidity in well GWA-7, GPC proposes to abandon GWA-7. A SCS-contracted driller, with GEI oversight services, installed GWA-7A on August 29, 2018 in the area of GWA-7 in an attempt to intercept an interval with less fines than the existing well. The attempt was successful with the installation of GWA-7A.

GPC is seeking approval to abandon these wells as they do not provide representative groundwater conditions for the Site. In the meantime, GEI will continue with the routine monitoring activities on the wells proposed for abandonment until EPD approves the request to abandon the wells.

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.

The proposed monitoring well network, including piezometer and monitoring well locations, is shown on Figure 2. Well maintenance was performed in April 2019 on the existing groundwater monitoring network, and included the following activities:

- Cleaned well pads
- Removed rust on latches and replaced expansion caps (as needed)
- Drilled weep holes
- Added universal reflective signs containing the well names

2.2 Alternate Source Demonstrations

Statistically significant increases (SSIs) of State D&O groundwater monitoring parameters were reported in the *2017 First Semi-Annual Groundwater Monitoring Report* (ERM, 2017). The *2017 First Semi-Annual Groundwater Monitoring Report* listed an SSI for barium in monitoring well GWC-5.

An alternate source demonstration (ASD) was submitted to EPD in August 2017 identifying natural variation as the source of elevated barium in this well. A Sen's Slope/Mann-Kendall trend test was performed to graphically and statistically to evaluate the barium concentrations in GWC-5. Barium in GWC-5 does not exhibit a statistically significant trend. Elevated barium concentrations in GWC-5 are attributable to variability of naturally occurring

constituents and are therefore, not a result of a release from the Site. Groundwater elevation, concentration of barium, and measured specific conductivity recorded at GWC-5 are consistent with measurements collected at GWC-5 since June 2016. The last 2 years of groundwater data are also consistent with the findings of the ASD.

An ASD was completed concluding that Inactive Landfill No. 3 was not the source of the observed SSIs. The ASD is provided in Appendix A.

2.3 Detection Monitoring

The detection groundwater monitoring program was implemented by collecting eight background groundwater samples from each monitoring well within the well network and analyzed for Appendix III and IV constituents as part of the background monitoring period. In addition, two rounds of semiannual groundwater samples were collected from each monitoring well as the initial and second detection monitoring events, respectively, and analyzed for Appendix III constituents. Copies of the analytical data packages for background and semiannual detection monitoring events are included in Appendix B.

2.3.1 Background Monitoring

A minimum of eight 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 ending in October 2018. Data reports for the background sampling events are included in Appendix B. Background monitoring event analytical data is summarized in Table 3.

2.3.2 Initial Detection Monitoring

Following background monitoring, the initial detection monitoring event was completed in January 2019. A second detection monitoring event was conducted in March 2019. Groundwater samples were collected from each monitoring well and analyzed for Appendix III constituents. Data for the initial and second detection monitoring events are summarized in Table 4 and copies of the laboratory reports are included in Appendix B.

2.4 Other Sampling

Two semiannual compliance groundwater monitoring events were conducted in 2019 (January and March) to comply with the EPD Rules for Solid Waste Management 391-3-4-.10 and the approved EPD Solid Waste Permit No. 051-010D(LI). Groundwater samples were collected from each monitoring well (if adequate groundwater to sample was available) and analyzed for state compliance parameters (barium, beryllium, chromium, cobalt, copper,

lead, vanadium, and zinc) according to the according to the EPD-approved *Plant McIntosh Ash Disposal Site No. 3 Revised Design-Operation Plan Groundwater Monitoring Plan* (Groundwater Monitoring Plan [GMP]), (GPC, 1999, revised 2010) and the August 2017 minor modification. Results from the January 2019 semiannual compliance monitoring events were submitted to EPD in the *Semiannual Groundwater Monitoring Report - January 2019* (GEI, 2019). Copies of the results and the analytical data packages for the January and March 2019 semiannual compliance events are included in Appendix B.

3. Sample Methodology and Analyses

GEI conducted the field work described herein. The field activities and results of the groundwater sampling events are summarized in the following sections. Copies of the laboratory analytical and field sampling reports are included in Appendix B.

3.1 Groundwater Level Measurement

Prior to conducting each groundwater sampling event, groundwater elevations were collected from each piezometer and well in the network at the Site. GEI used an electronic water level indicator to measure water levels to the nearest 0.01 foot. The water levels and corresponding groundwater elevations measured during the detection monitoring events are summarized in Table 5.

Potentiometric surface elevation contours and estimated groundwater flow direction were developed using the groundwater elevation data in January 2019 (Figure 3) and March 2019 (Figure 4). Interpretation of the potentiometric surface elevation contours indicates that groundwater flows from the southwest to the northeast across the Site (Figures 3 and 4), which is consistent with previous events.

3.2 Groundwater Gradient and Flow Velocity

Horizontal flow velocity at the Site was calculated using a derivation of Darcy's Law. Specifically,

$$v = \text{linear velocity} = \frac{Ki}{\eta_e}$$

where :

K = hydraulic conductivity

$$i = \text{hydraulic gradient} = \frac{(h_1 - h_2)}{L}$$

η_e = effective porosity

h_1 and h_2 = groundwater elevation at locations 1 and 2

L = distance between locations 1 and 2

As presented in previous reports and as used in previous reports and originally specified in the GMP (GPC, 2010) the average hydraulic conductivity of the shallow aquifer used in the

calculations is 2.24 feet per day (ft/day). Soils at the screened intervals of the wells are generally classified as silty sands (SM). The default value for effective porosity for this type soil is 0.20 (USEPA 530/SW-89-031, 1989). To calculate an average gradient across Inactive Landfill No. 3, the hydraulic gradient was calculated between three separate well pairs: GWA-1A/PZ-2 and GWA-1A/GWC-1, and GWA-3A/GWC-2 (Table 6). The average calculated groundwater flow velocity for March 2019 is 0.061 ft/day or 22.27 feet per year (ft/year).

3.3 Groundwater Sampling

Wells were purged using a peristaltic pump or submersible bladder pump with disposable tubing. 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. While the wells were purged, water level data and purge volumes were recorded electronically and by hand, and the following field parameters were collected:

pH (field)	Oxidation Reduction Potential (ORP)	Temperature
Specific Conductivity	Dissolved Oxygen (DO)	Turbidity

Monitoring wells were purged and sampled and using low-flow sampling procedures. A SmarTroll[®] (In-Situ[®] field instrument) was used to monitor and record field water quality parameters 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 International Organization for Standardization (ISO) compliant turbidity meter. Groundwater samples were collected when the following stabilization criteria were met:

- ± 0.1 standard units for pH
- ± 5 percent for specific conductance
- ± 0.2 milligrams per liter (mg/L) or ± 10 percent for DO > 0.5 mg/L (whichever is greater). No criterion applies if DO < 0.5 mg/L
- Turbidity measurements less than 10 nephelometric turbidity units (NTU)

Once stabilization was achieved, unfiltered samples were collected in laboratory supplied bottles, placed in ice-packed coolers, and submitted to TestAmerica, Inc. (TAL) in

Pensacola, Florida and Pittsburgh, Pennsylvania following chain-of-custody protocol. Field sampling data sheets are included in Appendix B.

3.4 Laboratory Analyses

Groundwater samples were collected in January 2019 and March 2019 from wells in the certified groundwater monitoring network and analyzed for Appendix III and State Compliance D&O monitoring parameters as part of the detection monitoring program. Samples were analyzed using methods described in USEPA SW846, Methods for Chemical Analysis of Water and Wastes (MCAWW), and Standard Method for The Examination of Water and Wastewater (SM). Specific methods are identified on the laboratory analytical data reports included in Appendix B. A summary of background groundwater monitoring data collected from August 2016 through October 2018 is included in Table 3. A summary of detection groundwater monitoring data collected in 2019 for the Site is included in Table 4.

Laboratory analyses were performed by an accredited TAL facility. TAL is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintains a NELAP certification for all parameters analyzed during the groundwater monitoring events in 2019 at the Site. In addition, TAL is certified by the state of Georgia to perform analysis. Laboratory reports and chain-of-custody records for the monitoring events are presented in Appendix B.

3.5 Quality Assurance and Quality Control

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every 10 samples. QA/QC samples included field equipment rinse blanks (FERB), field blanks (FB), and duplicate (DUP) samples. QA/QC sample data were evaluated during data validation (as discussed below) and are included in Appendix B.

Groundwater quality data in this report was validated in accordance with USEPA guidance (USEPA, 2011) and the analytical methods. Data validation consisted of reviewing holding times, laboratory methods, field equipment blanks and control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences (RPDs), post digestions spikes, and reporting limits (RLs) to verify sample integrity. 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 and described in Section 4.

The data presented in Tables 3 and 4 are representative of the validated data, and not necessarily that which is included in the laboratory reports. The tables provided in the data

validation reports included in Appendix B summarize the contamination and validation actions taken (if warranted) based on data validation.

4. Statistical Analyses

The statistical approach used for data analysis of Appendix III groundwater monitoring data was performed according to the PE-certified statistical method for the Site (Section 4.1). State Compliance D&O parameters were statistically evaluated using interwell comparison methods for the January 2019 data and intrawell comparison methods for the March 2019 data, which are the revised statistical methods proposed by Groundwater Stats Consulting, LLC as described below in Section 4.2 below. A summary of groundwater statistical analysis of January 2019 and March 2019 monitoring data is included with the Sanitas™ statistical outputs in Appendices C and D. Results from these analyses are summarized in the following sections.

4.1 Statistical Methods – Appendix III Parameters

The statistical test used to evaluate the Appendix III groundwater monitoring data will be interwell prediction limit (PL) method combined with the option of a 1-of-2 resample plan for all parameters. The interwell PLs pool background data from the network of upgradient wells to calculate a PL. An “initial exceedance” occurs when any downgradient well data exceed the PL.

If data from a sampling event initially exceeds the PL, the resampling strategy may be used to verify the result. In 1-of-2 resampling, one independent resample may be collected and evaluated within 90 days to determine whether the initial exceedance is verified. If a resample exceeds the PL, the initial exceedance is verified, and an SSI is identified. When a re-sample 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 statistical method:

- Statistical analyses are not performed on analytes containing 100 percent non-detects (USEPA, 2009).
- When data contain less than 15 percent non-detects in background, simple substitution of one-half the RL is utilized in the statistical analysis. The RL utilized for non-detects is the Practical Quantitation Limit as reported by the laboratory.
- When data contain between 15 to 50 percent 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 RL.

- Nonparametric PL are used on data containing greater than 50 percent non-detects.

The SanitasTM groundwater statistical software was used to perform the statistical analyses (SanitasTM, 2007). SanitasTM is a proprietary decision support software package, developed in 1991, that incorporates the statistical tests required of Subtitle C and D facilities according to USEPA regulations and guidance as recommended in the USEPA Unified Guidance (USEPA, 2009) document.

4.2 Statistical Methods – State Compliance Parameters

In accordance with the facility D&O Plan, the statistical test used to evaluate the January 2019 State Compliance groundwater monitoring data was the interwell prediction limit method combined with a 1-of-2 resample plan for all constituents. The interwell PLs pool background data from the network of upgradient wells to calculate a PL 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 exceeds the PL, the resampling strategy may be used to verify the result. In 1-of-2 resampling, one independent resample may be collected and evaluated within 90 days to determine whether the initial exceedance is verified. If a resample exceeds the PL, the initial exceedance is verified, and an SSI is identified. When a re-sample 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.

In August 2019, analytical data for State Compliance D&O parameters were evaluated to determine an appropriate statistical method for the data set. Groundwater Stats Consulting, LLC evaluated the background D&O parameter data set and recommended that an intrawell upper prediction limit evaluation method combined with a 1-of-2 resampling plan for all D&O constituents should be used to statistically evaluate the Site data. The statistical evaluation of the March 2019 sampling results using the revised intrawell statistical methods was completed on August 9, 2019.

In an intrawell comparison, analytical results from an individual well are compared to historical analytical results in that same well. If data from a sampling event initially exceeds the PL, the resampling strategy may be used to verify the result. In 1-of-2 resampling, one independent resample may be collected and evaluated within 90 days to determine whether the initial exceedance is verified. If a resample result exceeds the PL, the initial exceedance

is verified, and an SSI is identified. When a re-sample 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 both the interwell and intrawell statistical methods:

- Statistical analyses are not performed on analytes containing 100 percent non-detects (USEPA, 2009).
- When data contain less than 15 percent non-detects in background, simple substitution of one-half the RL is utilized in the statistical analysis. The RL utilized for non-detects is the Practical Quantitation Limit as reported by the laboratory.
- When data contain between 15 to 50 percent 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 RL.
- Nonparametric PL are used on data containing greater than 50 percent non-detects.

The SanitasTM groundwater statistical software was used to perform the statistical analyses (SanitasTM, 2007). SanitasTM is a proprietary decision support software package, developed in 1991, that incorporates the statistical tests required of Subtitle C and D facilities according to USEPA regulations and guidance as recommended in the USEPA Unified Guidance (USEPA, 2009) document.

4.3 Statistical Analyses Results – Appendix III Parameters

Analytical data from the first (January 2019) and second (March 2019) semiannual detection monitoring events at the Site were statistically analyzed in accordance with the PE-certified statistical method. A summary of groundwater statistical analysis of January 2019 and March 2019 Appendix III semiannual monitoring data and comparison to PLs is included with the SanitasTM statistical analysis and outputs are provided in Appendices C1 (January 2019 results) and C2 (March 2019 results).

Based on the statistical results presented in Appendix C1 and C2, a PL exceedance was identified in January 2019 for total dissolved solids (TDS) in well GWC-5. Verification resampling for TDS in GWC-5 was conducted in March 2019, within 90 days of identifying the SSI. The reported concentration of TDS in GWC-5 in the resampling event was below

the PL. Since the resample result did not verify the initial result, there is no SSI for TDS in GWC-5.

4.4 Statistical Analyses Results – State Compliance Parameters

Analytical data from the first (January 2019) and second (March 2019) semiannual detection monitoring events at the Site were statistically analyzed in accordance with the approved facility D&O Plan and the minor modification dated August 9, 2019 (GPC, 2019). The EPD approved the minor modification on August 20, 2019. A summary of groundwater statistical analysis of January and March 2019 semiannual monitoring data and comparison to PLs is included with the Sanitas™ statistical analysis and outputs are provided in Appendices D1 and D2 for the January 2019 and March 2019 sampling events, respectively. Based on the statistical results presented in Appendices D1 and D2, PL exceedances were identified for the following:

- Barium - GWC-5 (January and March 2019)
- Cobalt - GWC-5 (March 2019)
- Chromium - GWC-2 (March 2019)

The source for elevated barium concentrations was previously addressed with the August 2017 ASD discussed in Section 2.2 and provided in Appendix A. As such GWC-5 was not resampled and there is no SSI for barium. The chromium and cobalt SSIs are unverified. GPC will conduct verification resampling during the next semiannual event in September 2019.

4.5 Appendix IV Background Data

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 and has not implemented assessment monitoring at the Site. Therefore, statistical analysis of the Appendix IV data has not been performed.

5. Monitoring Program Status

The Site is in detection monitoring. Statistical evaluations of the January 2019 and March 2019 detection groundwater monitoring data for the Site identified an SSI for barium in well GWC-5. An ASD for barium was completed that concludes that the Site was not the source of the SSI. The ASD is included in Appendix A. If the SSIs are not verified, the Site will remain in detection monitoring.

SSIs were also identified for cobalt in monitoring well GWC-5 (March 2019) and chromium in monitoring well GWC-2 (March 2019) during the statistical evaluation completed on August 9, 2019. The cobalt and chromium SSIs are unverified. GPC will conduct verification resampling during the next semiannual groundwater monitoring event in September 2019.

6. Conclusions and Future Actions

Eight background monitoring events were conducted at the Site from August 2016 through October 2018. The initial and second semiannual detection monitoring events were conducted in January 2019 and March 2019 at the Site. Statistical evaluations of the groundwater monitoring data for the Site identified an SSI for barium in GWC-5. An ASD for barium was completed and is provided in Appendix A. SSIs were also identified for cobalt in monitoring well GWC-5 and chromium in monitoring well GWC-2 during the statistical evaluation completed on August 9, 2019. The cobalt and chromium SSIs are unverified. GPC will conduct verification resampling during the next semiannual groundwater monitoring event in September 2019.

Therefore, GEI recommends the following:

- Perform a resampling event for cobalt in well GWC-5 and chromium in monitoring well GWC-2 in September 2019.
- Perform semiannual groundwater monitoring in the second half of 2019.
- Continue semiannual reporting. Submit semiannual report evaluating data collected during the second of half of the year on February 1st.

7. References

- ERM, 2017. *2017 First Semi-Annual Groundwater Monitoring Report*, prepared by Environmental Resources Management. May 2017.
- GEI, 2019. *Semiannual Groundwater Monitoring Report – January 2019*, prepared by GEI Consultants, Inc. June 2019.
- GPC, 2010. *Plant McIntosh Ash Disposal Site No. 3 Revised Design-Operation Plan Groundwater Monitoring Plan*, prepared by GPC. 1999, Revised February 15, 2010.
- GPC, 2019. *Requests for Minor Modification to Solid Waste Handling Permits, Multiple Georgia Power Private Industry Solid Waste Disposal Facilities, Incorporation of Alternate Statistical Methods into Groundwater Monitoring Plans*, prepared by GPC. August 9, 2019.
- Sanitas™: Groundwater Statistical Software, Sanitas™ Technologies, Shawnee, KS, 2007. www.sanitastech.com.
- SCS ES&EE, 2002. *Savannah Electric Plant McIntosh Proposed Ash Monofill Site Acceptability Report*. July 2002.
- USEPA, 1989. *RCRA Facility Investigation (RFI) Guidance, Volume II of IV: Soil, Groundwater, Subsurface Gas Releases*. EPA/530/SW-89-031. Office of Solid Waste Management Division, U.S. Environmental Protection Agency, Washington, D.C.
- USEPA, 2009. *Unified Guidance, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*. Office of Solid Waste Management Division, U.S. Environmental Protection Agency, Washington, D.C. March 2009.
- USEPA, 2011. *Data Validation Standard Operating Procedures*. Science and Ecosystem Support Division. Region IV. Athens, GA. September 2011.
- USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN- 2050-AE81. April.
- USEPA. 2017. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA- 540-R-2017-001]. Washington, DC. January.

Tables

Table 1. Monitoring Well Network Summary
2019 Annual Groundwater Monitoring and Corrective Action Report
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Well ID	Installation Date	Northing	Easting	Total Installed Depth (ft bTOC)	Ground Surface Elevation (ft)	Top of Casing Elevation (ft)	Bottom of Well Elevation (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Location and Purpose
GWA-1	5/6/1998	852026.00	954547.02	36.00	63.98	66.93	30.93	41.43	31.43	Upgradient Monitoring Well
GWA-1A	1/5/2017	852024.53	954555.64	37.30	63.91	66.78	29.48	39.48	29.48	Upgradient Monitoring Well
GWA-2	5/7/1998	851831.67	954854.59	33.00	63.37	66.19	33.19	38.69	33.69	Upgradient Monitoring Well
GWA-2A	1/10/2017	851830.47	954844.74	43.18	63.34	66.34	23.16	33.16	23.16	Upgradient Monitoring Well
GWA-2B	8/29/2018	851832.11	954866.69	51.78	63.40	66.18	14.40	24.70	14.70	Upgradient Monitoring Well
GWA-3A	5/16/1998	851893.80	955179.82	33.88	59.69	62.79	28.91	39.41	29.41	Upgradient Monitoring Well
GWA-3B	5/16/1998	851892.22	955179.80	18.56	59.96	62.80	44.24	54.74	44.74	Upgradient Monitoring Well
GWA-4	5/7/1998	851980.95	955475.64	29.16	58.85	62.01	32.85	38.35	33.35	Upgradient Monitoring Well
GWA-5	5/7/1998	852110.88	955844.72	33.00	57.31	60.43	27.43	37.93	27.93	Upgradient Monitoring Well
GWA-7	11/7/2000	852261.79	954667.70	32.77	65.03	67.80	35.03	45.53	35.53	Upgradient Monitoring Well
GWA-7A	8/29/2018	852253.93	954655.56	46.94	65.64	68.18	21.24	31.54	21.54	Upgradient Monitoring Well
GWC-1	1/22/1996	852446.98	955308.28	35.96	63.28	66.08	30.12	39.92	30.62	Downgradient Monitoring Well
GWC-2	1/23/1996	852344.00	955958.34	36.78	60.56	64.21	27.43	37.23	27.93	Downgradient Monitoring Well
GWC-3	1/25/1996	852760.20	954845.76	35.51	63.71	66.91	31.40	41.20	31.90	Downgradient Monitoring Well
GWC-4A	5/16/1998	852544.54	955702.09	36.96	63.60	66.62	29.66	40.16	30.16	Downgradient Monitoring Well
GWC-4B	5/16/1998	852546.34	955700.55	18.00	63.63	66.83	48.83	59.33	49.33	Downgradient Monitoring Well
GWC-5	5/5/1998	852679.45	955461.52	30.56	64.62	68.08	37.52	48.02	38.02	Downgradient Monitoring Well
GWC-6	5/6/1998	852469.76	955055.45	32.64	65.34	68.51	35.87	41.37	36.37	Downgradient Monitoring Well
PZ-1	8/29/2018	852399.52	954905.49	52.68	64.96	67.64	14.96	25.26	15.26	Downgradient Piezometer
PZ-2	8/28/2018	852550.22	955305.10	42.26	65.24	67.50	25.24	35.54	25.54	Downgradient Piezometer
PZ-3	8/30/2018	852031.81	955677.81	41.57	58.73	61.30	19.73	30.03	20.03	Upgradient Piezometer

Notes:

bTOC - below top of casing

ft - feet

All monitoring wells are 2 inches in diameter and casing material is polyvinyl chloride (PVC)

Elevations are in feet relative to North American Vertical Datum (NAVD)88

Northing and easting are in feet North American Datum (NAD)83, State Plane Georgia East Zone

GWA-1A and GWA-2A were installed as replacement wells for GWA-1 and GWA-2, respectively

GWC-7 was originally installed 5/6/1998 and was replaced with a new well (also called GWC-7) in November 2000

GWA-7 is the same well as GWC-7, but the name was modified in February 2010 as a part of the Minor Modification Request to the D&O plan

GWA-2B is proposed as a replacement well for GWA-2/GWA-2A in the November 2018 submittal

GWA-7A is proposed as a replacement well for GWA-7 in the November 2018 submittal

Table 2. Groundwater Sampling Event Summary for 2016-2019
2019 Annual Groundwater Monitoring and Corrective Action Report
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Well ID	Hydraulic Location and Purpose	Summary of Sampling Events									
		Background								Detection	
		August 2016	January 2017	July 2017	September 2017	January 2018	March 2018	July 2018	October 2018	January 2019	March 2019
GWA-1	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-1A	Upgradient Monitoring Well	Not Installed	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-2	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-2A	Upgradient Monitoring Well	Not Installed	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-2B	Upgradient Monitoring Well	Not Installed							✓	✓	✓
GWA-3A	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-3B	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-4	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-5	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-7	Upgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWA-7A	Upgradient Monitoring Well	Not Installed							✓	✓	✓
GWC-1	Downgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWC-2	Downgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWC-3	Downgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWC-4A	Downgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWC-4B	Downgradient Monitoring Well	✓	✓	✓	✓	✓	DRY				✓
GWC-5	Downgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GWC-6	Downgradient Monitoring Well	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

GWA-1A was installed as a replacement well for GWA-1 in January 2017.
GWA-2A was installed as a replacement well for GWA-2 in January 2017.
GWA-2B was installed as a proposed replacement well for GWA-2 and GWA-2A in August 2018 and first sampled in October 2018.
GWA-7A was installed as a proposed replacement well for GWA-7 in August 2018 and first sampled in October 2018.

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID								
		GWA-1	GWA-1A	GWA-1A	GWA-1A	GWA-1A	GWA-1A	GWA-1A	GWA-1A	
		9/1/16	2/28/17	7/17/17	9/20/17	1/8/18	3/27/18	7/10/18	10/08/18	
Appendix III	Boron	NE	0.029 J	<0.050	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021
	Calcium	NE	26	2.7	1.7	1.5	1.7	1.7	1.7	1.6
	Chloride	250	8.0	8.5	7.8	8	7.9	8.0 J	7.8	8.5
	Fluoride	4	<0.2	0.098 J	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082
	pH	NE	--	5.33	5.09	5.29	5.26	5.27	5.17	5.18
	Sulfate	250	< 1	2.7	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70
	TDS	500	2200	74	50	26	16 J	40 J	90	70
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	Arsenic	0.01	0.0089	<0.0013	0.0005 J	< 0.0013	< 0.00046	< 0.00046	0.00055 J	< 0.00046
	Barium	2	0.86	0.027	0.022	0.023	0.022	0.023	0.024	0.030
	Beryllium	0.004	0.0084	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Chromium	0.1	0.12	0.0012 J	0.003	0.0025	0.0038	0.0044	0.0045	--
	Cobalt	NE	0.023	0.00048 J	< 0.0025	< 0.0025	< 0.00040	< 0.00040	< 0.00040	< 0.00040
	Lead	0.015	0.082	<0.0013	< 0.0013	0.00035 J	< 0.00035	< 0.00035	< 0.00035	< 0.00035
	Lithium	NE	0.023	0.009	0.0087	0.011	0.011	0.012 J	0.0099	0.011 J
	Mercury	NE	0.00012 J	<0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	< 0.000070
	Molybdenum	NE	<0.015	<0.015	0.0033 J	< 0.01	0.0011 J	< 0.00085	0.00098 J	< 0.00085
	Selenium	0.05	0.0043	0.001 J	0.0027	0.00074 J	0.0019	0.0014 J	0.0021 J	0.00089 J
	Thallium	0.002	0.00083	<0.00050	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	< 0.000085
	Radium 226 and 228	5	6.86	0.59	0.35	0.73	0.44	1.31 J	0.623 J	< 0.416

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID											
		GWA-2	GWA-2A	GWA-2A	GWA-2A	GWA-2A	GWA-2A	GWA-2A	GWA-2A	GWA-2A	GWA-2B		
		9/1/16	1/18/17	7/18/17	DUP-Jul.17	9/20/17	1/8/18	3/27/18	7/10/18	10/08/18	10/08/18		
Appendix III	Boron	NE	<0.05	<0.050	< 0.05	<0.05	<0.05	< 0.02	< 0.021	< 0.021	< 0.021	0.76	
	Calcium	NE	4.0	3.3	3.1	3.1	3.2	3.4	3.5	3.4	3.7	17	
	Chloride	250	12.0	12	12	12	12	12	13 J	12	13	7.3	
	Fluoride	4	<0.2	<0.20	< 0.2	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	
	pH	NE	--	5.37	5.54	5.54	5.25	5.52	5.32	5.44	5.45	5.29	
	Sulfate	250	<1	<1.0	< 1	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	73
	TDS	500	180	74	62	66	44	24 J	36 J	58	80	170	
Appendix IV	Antimony	0.006	<0.0025	<0.0025	0.0021 J	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	
	Arsenic	0.01	0.00069 J	<0.0013	0.00063 J	< 0.0013	< 0.0013	< 0.00046	< 0.00046	< 0.00046	< 0.00046	0.00095 J	
	Barium	2	0.057	0.042	0.035	0.035	0.039	0.10	0.041	0.042	0.040	0.049	
	Beryllium	0.004	0.00097 J	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.0014 J	
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00071 J	
	Chromium	0.1	0.012	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0011	< 0.0011	0.0011 J	0.0011 J	< 0.0011	
	Cobalt	NE	0.0017 J	0.0006 J	0.00048 J	0.00049 J	0.00044 J	0.00044 J	0.00040 J	0.00044 J	0.00041 J	0.0051	
	Lead	0.015	0.0028	<0.0013	< 0.0013	< 0.0013	0.0058 FZF1	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	
	Lithium	NE	0.011	0.0096	0.0081	0.009	0.011	0.010	0.012 J	0.0097	0.011 J	0.0091 J	
	Mercury	NE	<0.0002	<0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070	
	Molybdenum	NE	<0.015	<0.015	0.0031 J	< 0.01	< 0.01	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	
	Selenium	0.05	0.0006 J	0.0014	0.0022	0.00026 J	0.00041 J	0.0013	0.0017 J	< 0.0013	0.0026	0.0049	
	Thallium	0.002	0.00009 J	<0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	< 0.000085	0.000090 J	
	Radium 226 and 228	5	2.34	0.35	0.38	0.65	0.54	0.59	1.61 J	0.872 J	< 0.399	1.11 J	

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID									
		GWA-3A	GWA-3A	GWA-3A	GWA-3A	GWA-3A	GWA-3A	GWA-3A	GWA-3A	GWA-3A	GWA-3A-Filtered
		8/31/16	1/19/17	7/18/17	9/20/17	1/9/18	3/27/18	7/10/18	10/9/18	10/09/18	
Appendix III	Boron	NE	<0.05	<0.050	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.021
	Calcium	NE	1.5	1.8	1.7	1.7	1.9	1.9	1.9	2.2	2.1
	Chloride	250	6.8	6.9	7.4	7.6	8.6	9.4 J	11	14	12
	Fluoride	4	<0.2	<0.20	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082
	pH	NE	4.92	4.86	5.02	4.72	4.83	4.91	4.87	4.84	--
	Sulfate	250	<1	<1.0	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
	TDS	500	42	52	32	16	4.0 J	30 J	30	56	44
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	Arsenic	0.01	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.00046	< 0.00046	< 0.00046	0.00046 J	< 0.00046
	Barium	2	0.043	0.052	0.046	0.10	0.050	0.054	0.056	0.061	0.054
	Beryllium	0.004	0.00035 J	<0.0025	0.00038 J	0.00039 J	< 0.00034	< 0.00034	0.00038 J	0.00044 J	0.00036 J
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Chromium	0.1	0.0042	0.0039	0.0018 J	0.0026	0.0038	0.0037	0.0022 J	0.0047	0.0023 J
	Cobalt	NE	0.00095 J	0.00087 J	0.001 J	0.0011 J	0.0011 J	0.0011 J	0.0012 J	0.0014 J	0.0012 J
	Lead	0.015	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.00035	< 0.00035	< 0.00035	0.00039 J	< 0.00035
	Lithium	NE	<0.005	0.0035 J	< 0.005	0.0034 J	0.0041 J	< 0.0011	0.0032 J	< 0.0011	< 0.0011
	Mercury	NE	<0.0002	<0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070
	Molybdenum	NE	<0.015	<0.015	0.001 J	0.0015 J	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085
	Selenium	0.05	0.00035 J	<0.0013	0.00067 J	0.00098 J	0.00039 J	< 0.00024	< 0.00024	0.00029 J	0.00035 J
	Thallium	0.002	<0.0005	<0.00050	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085
Radium 226 and 228	5	0.97	0.64	0.58	< 5	1.12 J	1.41 J	0.800 J	0.841 J	< 0.341	

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). pH results are reported in standard units (S.U.).
4. J Value 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 (J value) is qualified by the laboratory as an estimated number.
5. NE 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.
6. TDS indicates total dissolved solids.
7. < 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 preceded by < is qualified by the laboratory as estimated.
8. Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
9. -- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID										
		GWA-3B	GWA-3B	GWA-3B	GWA-3B	GWA-3B-Filtered	GWA-3B	GWA-3B	GWA-3B	GWA-3B	GWA-3B	
		8/31/16	1/23/17	7/18/17	9/20/17	9/20/17	1/9/18	3/28/18	7/10/18	Jul-18 DUP	10/08/18	
Appendix III	Boron	NE	0.029 J	<0.050	0.045 J	<0.05	0.043 J	0.026 J	0.021 J	<0.021	0.021 J	0.024 J
	Calcium	NE	2.7	3.7	2.8	2.7	2.9	2.5	2.2	1.6	1.7	1.6
	Chloride	250	9.4	4.3	2	4.6	4.7	7.9	8.5 J	21	20	26
	Fluoride	4	<0.2	<0.20	<0.2	0.086 J	0.088 J	<0.08	<0.082	<0.082	<0.082	<0.082
	pH	NE	5.46	5.46	5.32	5.09	5.09	4.97	4.80	4.80	4.80	5.10
	Sulfate	250	6.3	9.7	7.1	8.8	8.7	9.8	11	3.0	2.8	1.9
	TDS	500	60	48	36	56	46	12	34 J	58	70	30
Appendix IV	Antimony	0.006	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Arsenic	0.01	<0.0013	<0.0013	<0.0013	0.00071 J	0.00061 J	0.00060 J	<0.00046	0.0011 J	0.0015	0.0067
	Barium	2	0.044	0.044	0.052	0.051	0.051	0.058	0.073	0.078	0.079	0.068
	Beryllium	0.004	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034
	Cadmium	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034
	Chromium	0.1	0.0022 J	<0.0025	<0.0025	<0.0025	0.0015 J	<0.0011	<0.0011	<0.0011	<0.0011	0.0013 J
	Cobalt	NE	0.00061 J	<0.0025	<0.0025	0.00041 J	<0.0025	0.00070 J	0.00074 J	0.0012 J	0.0012 J	0.0013 J
	Lead	0.015	0.0016	0.00055 J	0.0008 J	0.0016	0.001 J	0.00041 J	0.00036 J	0.00053 J	0.00047 J	0.00099 J
	Lithium	NE	<0.005	<0.0050	<0.005	<0.005	<0.005	<0.0032	<0.0011	0.0014 J	0.0014 J	<0.0011
	Mercury	NE	0.00091 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.000070	--	<0.000070	<0.000070	<0.000070
	Molybdenum	NE	<0.015	<0.015	<0.01	<0.01	0.0031 J	<0.00085	--	<0.00085	<0.00085	<0.00085
	Selenium	0.05	0.00026 J	<0.0013	0.00028 J	<0.0013	0.00034 J	<0.00024	--	<0.00024	<0.00024	0.00053 J
	Thallium	0.002	<0.0005	<0.00050	<0.0005	<0.0005	<0.0005	<0.000085	--	<0.000085	<0.000085	<0.000085
Radium 226 and 228	5	0.34	0.28	0.58	1.13	1.13	0.58 J	1.26 J	1.22 J	1.07 J	0.985 J	

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID								
		GWA-4	GWA-4	GWA-4	GWA-4	GWA-4	GWA-4	GWA-4	GWA-4	GWA-4
		8/31/16	1/19/17	7/18/17	9/21/17	1/9/18	3/27/18	7/10/18	10/08/18	
Appendix III	Boron	NE	<0.05	0.027 J	<0.05	<0.05	<0.02	<0.021	<0.021	<0.021
	Calcium	NE	0.88	1.1	0.86	0.9	1.0	0.89	0.99	1.1
	Chloride	250	3.7	4.6	4.2	4.4	4.4	4.9 J	5.5	6.6
	Fluoride	4	<0.2	0.089 J	<0.2	<0.2	<0.08	<0.082	<0.082	<0.082
	pH	NE	4.79	4.72	4.96	4.70	4.91	4.92	4.94	4.76
	Sulfate	250	7.0	6.3	4.7	4.5	3.0	3.8	3.4	3.4
	TDS	500	14	34	26	24	16	< 3.4 J	14	36
Appendix IV	Antimony	0.006	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010
	Arsenic	0.01	<0.0013	<0.0013	<0.0013	<0.0013	0.00086 J	<0.00046	<0.00046	0.00067 J
	Barium	2	0.041	0.052	0.037	0.10	0.043	0.039	0.043	0.042
	Beryllium	0.004	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034
	Cadmium	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034
	Chromium	0.1	<0.0025	<0.0025	<0.0025	<0.0025	0.0087	<0.0011	<0.0011	<0.0011
	Cobalt	NE	0.00055 J	0.00041 J	0.0007 J	0.00073 J	0.0012 J	0.00081 J	0.00086 J	0.00092 J
	Lead	0.015	<0.0013	<0.0013	<0.0013	0.0076	0.0023	<0.00035	<0.00035	<0.00035
	Lithium	NE	<0.005	<0.0050	<0.005	<0.005	<0.0032	<0.0011	0.0011 J	<0.0011
	Mercury	NE	<0.0002	<0.0002	<0.0002	<0.0002	<0.000070	<0.000070	<0.000070	<0.000070
	Molybdenum	NE	<0.015	<0.015	<0.01	<0.01	<0.00085	<0.00085	<0.00085	<0.00085
	Selenium	0.05	0.00046 J	<0.0013	<0.0013	0.00042 J	0.00054 J	<0.00024	<0.00024	0.00054 J
	Thallium	0.002	<0.0005	<0.00050	<0.0005	<0.0005	<0.000085	<0.000085	<0.000085	<0.000085
	Radium 226 and 228	5	0.56	0.21	0.78	0.66	<0.40	1.34 J	<0.510	1.06 J

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID								
		GWA-5	GWA-5	GWA-5	GWA-5	GWA-5	GWA-5	GWA-5	GWA-5	GWA-5
		8/31/16	1/19/17	7/19/17	9/21/17	1/9/18	3/27/18	7/10/18	10/08/18	
Appendix III	Boron	NE	0.073	0.036 J	0.07	0.07	0.042 J	0.037 J	0.042 J	0.044 J
	Calcium	NE	3.7	2.0	2.6	2.7	4.1	4.8	3.7	3.2
	Chloride	250	7.1	3.3	5.8	6.2	9.9	13 J	17	16
	Fluoride	4	0.13 J	<0.20	< 0.2	0.13 J	0.13 J	0.21	0.17 J	0.11 J
	pH	NE	4.53	4.79	4.83	4.57	4.40	4.11	4.62	4.51
	Sulfate	250	21	11	12	15	25	31	19	17
	TDS	500	66	48	48	76	18	48 J	76	8.0
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	Arsenic	0.01	0.0011 J	<0.0013	0.00094 J	0.00076 J	0.00064 J	< 0.00046	0.00067 J	< 0.00046
	Barium	2	0.093	0.079	0.085	0.10	0.13	0.18	0.14	0.11
	Beryllium	0.004	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Chromium	0.1	0.002 J	0.002 J	0.0017 J	0.0021 J	0.0019 J	< 0.0011	0.0012 J	0.0015 J
	Cobalt	NE	0.001 J	0.00046 J	0.00069 J	0.00073 J	0.0014 J	0.0019 J	0.0015 J	0.0013 J
	Lead	0.015	0.00099 J	0.001 J	0.00081 J	0.00086 J	0.00059 J	< 0.00035	0.00045 J	0.00037 J
	Lithium	NE	<0.005	<0.0050	< 0.005	< 0.005	< 0.0032	< 0.0011	0.0012 J	--
	Mercury	NE	0.000086 J	<0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	--
	Molybdenum	NE	<0.015	<0.015	< 0.01	< 0.01	< 0.00085	< 0.00085	< 0.00085	--
	Selenium	0.05	0.00082 J	0.0006 J	< 0.0013	0.00056 J	< 0.00024	< 0.00024	< 0.00024	--
	Thallium	0.002	<0.0005	<0.00050	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	--
	Radium 226 and 228	5	1.51	1.62	1.11	1.7	1.98 J	2.77 J	1.61 J	1.47 J

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
4. J Value 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 (J value) is qualified by the laboratory as an estimated number.
5. NE 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.
6. TDS indicates total dissolved solids.
7. < 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 preceded by < is qualified by the laboratory as estimated.
8. Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
9. -- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID													
		GWA-7	GWA-7	GWA-7	GWA-7	GWA-7-Filtered	GWC-7	GWA-7	GWA-7	GWA-7-Filtered	GWA-7	GWA-7-Filtered	GWA-7A		
		8/30/16	1/19/17	7/19/17	9/20/17	9/20/17	1/10/18	3/28/18	7/10/18	7/10/18	10/08/18	10/08/18	10/08/18		
Appendix III	Boron	NE	0.024 J	<0.050	< 0.05	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	1.3	
	Calcium	NE	1.4	1.3	0.95	1.0	1.0	1.2	1.2	1.4	1.1	0.91	1.3	17	
	Chloride	250	6.9	7.0	6.1	6.7	6.6	6.5	6.6 J	6.7	6.7	4.9	6.9	6.8	
	Fluoride	4	<0.2	<0.20	< 0.2	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	
	pH	NE	5.22	5.28	5.41	5.41	5.41	5.26	5.13	5.23	5.23	5.25	--	5.79	
	Sulfate	250	<1	<1.0	< 1	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	75
	TDS	500	74	86	68	70	64	64	36 J	88	54	72	92	180	
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	
	Arsenic	0.01	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046	0.00053 J	
	Barium	2	0.02	0.023	0.10	0.021	0.015	0.018	0.019	0.026	0.016	0.014	0.029	0.14	
	Beryllium	0.004	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	
	Chromium	0.1	0.0063	0.008	0.0062	0.0078	0.0077	0.0090	0.0081	0.0095	0.0065	0.0026	0.011	< 0.0011	
	Cobalt	NE	<0.0025	<0.0025	< 0.0025	0.00041 J	< 0.0025	< 0.00040	< 0.00040	0.00066 J	< 0.00040	< 0.00040	0.00080 J	0.0055	
	Lead	0.015	<0.0013	<0.0013	< 0.0013	0.00054 J	< 0.0013	< 0.00035	< 0.00035	0.0013	< 0.00035	0.00040 J	0.00099 J	< 0.00035	
	Lithium	NE	0.012	0.01	0.0083	0.011	0.011	0.010	0.010 J	0.010	0.0095	0.0088 J	0.011 J	0.0062 J	
	Mercury	NE	<0.0002	<0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070	
	Molybdenum	NE	<0.015	<0.015	< 0.01	< 0.01	< 0.01	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	
	Selenium	0.05	0.014	0.015	0.016	0.023	0.023	0.024	0.023	0.026	0.026	0.0094	0.027	0.0021	
	Thallium	0.002	<0.0005	<0.00050	< 0.0005	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085	
Radium 226 and 228	5	0.24 U	0.659	0.52	0.58	0.31	0.94 J	0.841 J	0.640 J	< 0.460	< 0.327	< 0.382	2.10 J		

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID										
		GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	GWC-1	
		8/31/16	1/23/17	7/19/17	9/21/17	Sept-17 DUP	1/9/18	3/28/18	DUP-Mar-18	7/11/18	10/09/18	
Appendix III	Boron	NE	0.023 J	<0.050	0.021 J	<0.05	0.022 J	0.025 J	<0.021	<0.021	<0.021	<0.021
	Calcium	NE	0.22 J	1.3	0.19 J	0.3	0.42	0.16 J	0.14 J	0.13 J	0.18 J	0.13 J
	Chloride	250	6.4	5.5	4.7	4.9	5.0	4.7	4.4 J	4.5 J	4.3	4.6
	Fluoride	4	<0.2	<0.20	<0.2	<0.2	<0.2	<0.08	<0.082	<0.082	<0.082	<0.082
	pH	NE	5.02	5.22	5.23	5.34	5.34	5.00	5.08	5.08	5.07	5.10
	Sulfate	250	<1	<1.0	<1	<1	<1	<0.70	<0.70	<0.70	<0.70	<0.70
	TDS	500	18	22	52	38	42	4.0 J	4.0 J	76 J	32 J	22
Appendix IV	Antimony	0.006	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Arsenic	0.01	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.00046	<0.00046	<0.00046	<0.00046	0.00064 J
	Barium	2	0.019	0.023	0.013	0.10	0.018	0.016	0.014	0.015	0.016	0.015
	Beryllium	0.004	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034
	Cadmium	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034
	Chromium	0.1	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	Cobalt	NE	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
	Lead	0.015	<0.0013	<0.0013	<0.0013	0.004	0.00046 J	<0.00035	<0.00035	<0.00035	<0.00035	<0.00035
	Lithium	NE	<0.005	<0.0050	<0.005	<0.005	<0.005	<0.0032	<0.0011	<0.0011	0.0011 J	<0.0011
	Mercury	NE	0.00073 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.000070	<0.000070	<0.000070	<0.000070	<0.000070
	Molybdenum	NE	<0.015	<0.015	<0.01	<0.01	<0.01	<0.00085	<0.00085	<0.00085	<0.00085	<0.00085
	Selenium	0.05	<0.0013	<0.0013	<0.0013	<0.0013	0.00042 J	0.00041 J	<0.00024	<0.00024	<0.00024	<0.00024
	Thallium	0.002	<0.0005	<0.00050	<0.0005	<0.0005	<0.0005	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085
Radium 226 and 228	5	0.37	0.17	0.52	<5	0.44	0.54 J	1.12 J	0.992 J	<0.567	<0.356	

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance		MCL/ (SMCL)	Well ID								
			GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2	GWC-2
			8/31/16	1/24/17	7/19/17	9/21/17	1/9/18	3/29/18	7/10/18	10/09/18	Oct-18 DUP
Appendix III	Boron	NE	0.023 J	<0.050	0.026 J	0.025 J	0.023 J	0.035 J	0.044 J	0.043 J	0.043 J
	Calcium	NE	5.5	2.9	4.2	2.9	1.7	2.2	3.9	1.7	1.7
	Chloride	250	5.6	5.4	5.6	5.5	5.6	5.3 J	5.2	5.4	5.6
	Fluoride	4	<0.2	<0.20	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082
	pH	NE	5.49	5.25	5.54	5.19	4.97	5.15	5.37	5.04	5.04
	Sulfate	250	<1	<1.0	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
	TDS	500	42	28	42	46	10	52 J	38	52	40
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	Arsenic	0.01	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046
	Barium	2	0.057	0.060	0.10	0.063	0.059	0.014	0.073	0.057	0.056
	Beryllium	0.004	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Chromium	0.1	0.0027	0.0034	0.0028	0.0035	0.0030	< 0.0011	0.0033	0.0039	0.0039
	Cobalt	NE	0.0006 J	0.00067 J	0.00079 J	0.00077 J	0.00092 J	0.00080 J	0.00097 J	0.00094 J	0.00095 J
	Lead	0.015	<0.0013	<0.0013	< 0.0013	0.0014	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035
	Lithium	NE	0.0033 J	<0.0050	< 0.005	< 0.005	< 0.0032	< 0.0011	0.0023 J	< 0.0011	< 0.0011
	Mercury	NE	0.00007 J	<0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070
	Molybdenum	NE	<0.015	<0.015	< 0.01	< 0.01	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085
	Selenium	0.05	<0.0013	<0.0013	< 0.0013	< 0.0013	0.00028 J	< 0.00024	< 0.00024	< 0.00024	< 0.00024
	Thallium	0.002	<0.0005	<0.00050	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085
	Radium 226 and 228	5	1.10	0.80	0.77	0.92	1.03 J	1.29 J	0.937 J	0.712 J	0.747 J

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
4. J Value 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 (J value) is qualified by the laboratory as an estimated number.
5. NE 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.
6. TDS indicates total dissolved solids.
7. < 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 preceded by < is qualified by the laboratory as estimated.
8. Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
9. -- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID											
		GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	GWC-3	
		9/1/16	2/2/17	7/20/17	9/21/17	1/9/18	3/28/18	Mar-18 DUP	7/10/18	Jul-18 DUP	10/09/18	Oct-18 DUP	
Appendix III	Boron	NE	<0.05	<0.050	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021
	Calcium	NE	2.0	2.2	2.1	2.3	2.2	2.1	2.1	2.1 J	< 0.13 J	2.0	2.0
	Chloride	250	10	11	10	11	10	10 J	9.9 J	9.9	9.8	10	10
	Fluoride	4	<0.2	<0.20	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082
	pH	NE	5.17	5.22	5.12	5.04	5.13	5.16	5.16	5.17	5.17	5.23	--
	Sulfate	250	<1	<1.0	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
	TDS	500	44	54	64	96	18	54 J	100 J	56 J	78 J	30 J	52 J
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	Arsenic	0.01	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046	0.00067 J	< 0.00046
	Barium	2	0.037	0.044	0.044	0.10	0.038	0.039	0.041	0.040 J	< 0.00049 J	0.036	0.036
	Beryllium	0.004	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Chromium	0.1	0.0031	0.0034	0.0036	0.0035	0.0035	0.0036	0.0036	0.0035	< 0.0011	0.0037	0.0036
	Cobalt	NE	0.00052 J	0.00054 J	0.0005 J	0.00047 J	0.00053 J	0.00050 J	0.00051 J	0.00053 J	< 0.00040	0.00051 J	0.00049 J
	Lead	0.015	<0.0013	<0.0013	< 0.0013	0.00052 J	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035
	Lithium	NE	0.0082	0.0092	0.0098	0.0088	0.0095	0.010 J	0.0094 J	0.0097	< 0.0011	0.0083 J	0.0085 J
	Mercury	NE	0.000076J	<0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070	< 0.000070
	Molybdenum	NE	<0.015	<0.015	< 0.01	< 0.01	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085
	Selenium	0.05	0.00026 J	0.00047 J	0.00046 J	0.00027 J	< 0.00024	< 0.00024	< 0.00024	< 0.00024	< 0.00024	0.00026 J	0.00027 J
	Thallium	0.002	<0.0005	<0.00050	< 0.0005	< 0.0005	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085	< 0.000085
Radium 226 and 228	5	0.36	--	0.85	0.916	1.62 J	0.842 J	0.616 J	0.651 J	0.704 J	< 0.321	< 0.325	

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID								
		GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A	GWC-4A
		8/31/16	1/25/17	7/20/17	9/21/17	1/9/18	3/28/18	7/10/18	10/09/18	
Appendix III	Boron	NE	<0.05	0.023 J	<0.05	<0.05	<0.02	<0.021	<0.021	<0.021
	Calcium	NE	0.42	0.37	0.29	0.3	0.38	0.44	2.0	0.34
	Chloride	250	19	15	14	14	15	14 J	13	13
	Fluoride	4	<0.2	<0.20	<0.2	<0.2	<0.08	<0.082	<0.082	<0.082
	pH	NE	4.89	4.73	4.96	4.78	4.79	4.44	4.88	4.85
	Sulfate	250	1.7	1.8	0.83 J	1.1	0.79 J	0.79 J	0.76 J	<0.70
	TDS	500	36	58	16	24	8.0	26 J	26	16
Appendix IV	Antimony	0.006	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010
	Arsenic	0.01	<0.0013	<0.0013	<0.0013	<0.0013	<0.00046	<0.00046	<0.00046	0.00078 J
	Barium	2	0.037	0.034	0.028	0.10	0.033	0.037	0.065	0.029
	Beryllium	0.004	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034
	Cadmium	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034
	Chromium	0.1	<0.0025	<0.0025	<0.0025	<0.0025	<0.0011	0.0019 J	0.0029	<0.0011
	Cobalt	NE	0.0006 J	0.00047 J	<0.0025	<0.0025	0.00048 J	0.00048 J	0.00084 J	0.00042 J
	Lead	0.015	<0.0013	<0.0013	<0.0013	<0.0013	<0.00035	<0.00035	<0.00035	<0.00035
	Lithium	NE	<0.005	<0.0050	<0.005	<0.005	<0.0032	<0.0011	0.0070	<0.0011
	Mercury	NE	0.000078 J	<0.0002	<0.0002	<0.0002	<0.000070	<0.000070	<0.000070	<0.000070
	Molybdenum	NE	<0.015	<0.015	0.0012 J	<0.01	<0.00085	<0.00085	<0.00085	<0.00085
	Selenium	0.05	<0.0013	<0.0013	0.00067 J	<0.0013	<0.00024	<0.00024	<0.00024	<0.00024
	Thallium	0.002	<0.0005	<0.00050	<0.0005	<0.0005	<0.000085	<0.000085	<0.000085	<0.000085
	Radium 226 and 228	5	1.19	1.15	0.83	0.87	0.59	1.14 J	0.746 J	0.938 J

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID						
		GWC-4B	GWC-4B	GWC-4B	GWC-4B	GWC-4B	GWC-4B	
		9/1/16	1/25/17	7/20/17	9/21/17	1/9/18	Jan-18 DUP	
Appendix III	Boron	NE	<0.05	0.03 J	< 0.05	0.024 J	< 0.02	< 0.02
	Calcium	NE	0.16 J	0.89	0.17 J	0.49	0.17 J	0.26
	Chloride	250	24	34	32	38	19	18
	Fluoride	4	<0.2	<0.20	< 0.2	< 0.2	< 0.08	< 0.08
	pH	NE	--	4.50	4.77	4.78	4.65	4.65
	Sulfate	250	0.78 J	11	1.5	4.3	0.81 J	0.74 J
	TDS	500	56	100	60	160	< 3.40	< 3.40 J
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010
	Arsenic	0.01	0.00071 J	<0.0013	0.0008 J	0.00083 J	< 0.00046	< 0.00046
	Barium	2	0.023	0.077	0.04	0.058	0.023	0.023
	Beryllium	0.004	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034
	Chromium	0.1	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0011	< 0.0011
	Cobalt	NE	<0.0025	0.00056 J	< 0.0025	0.00046 J	< 0.00040	< 0.00040
	Lead	0.015	<0.0013	0.00071 J	< 0.0013	0.0007 J	< 0.00035	< 0.00035
	Lithium	NE	<0.005	<0.0050	< 0.005	< 0.005	< 0.0032	< 0.0032
	Mercury	NE	0.00008 J	<0.0002	< 0.0002	< 0.0002	< 0.000070	< 0.000070
	Molybdenum	NE	<0.015	<0.015	< 0.01	< 0.01	< 0.00085	< 0.00085
	Selenium	0.05	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.00024	< 0.00024
	Thallium	0.002	<0.0005	--	< 0.0005	< 0.0005	< 0.000085	< 0.000085
Radium 226 and 228	5	0.65	0.96	1.69	1.11	0.68 J	0.69 J	

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID									
		GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5	GWC-5
		9/1/16	1/24/17	7/20/17	9/21/17	1/10/18	Jan-18 DUP	3/28/18	7/11/18	10/09/18	
Appendix III	Boron	NE	<0.05	<0.050	< 0.05	< 0.05	< 0.02	< 0.02	< 0.021	< 0.021	< 0.021
	Calcium	NE	21	10	8.1	8	11	11	9.5	9.6	8.0
	Chloride	250	<10	8.3	6.9	6.4	< 0.89	< 0.89	< 0.89 J	7.4	6.8
	Fluoride	4	<2	0.84	0.62	0.71	0.81	0.81	0.45	0.37	0.098 J
	pH	NE	7.21	8.32	7.41	6.94	7.39	7.39	7.31	7.09	6.68
	Sulfate	250	110	67	25	19	25	25	26	26	10
	TDS	500	500	160	210 H	280	94 J	130 J	60 J	290 J	44
Appendix IV	Antimony	0.006	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
	Arsenic	0.01	0.0032	0.0027	0.0014	0.0007 J	0.0013	0.0013	< 0.00046	0.00074 J	0.0011 J
	Barium	2	0.47	0.42	0.47	0.48	0.68	0.67	0.60	0.64	0.56
	Beryllium	0.004	<0.0025	<0.0025	0.00049 J	0.00068 J	< 0.00034	< 0.00034	< 0.00034	0.00043 J	0.00054 J
	Cadmium	0.005	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034
	Chromium	0.1	<0.0025	<0.0025	< 0.0025	< 0.0025	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011
	Cobalt	NE	0.011	0.009	0.0091	0.0093	0.0097	0.0097	0.010	0.011	0.012
	Lead	0.015	<0.0013	<0.0013	< 0.0013	< 0.0013	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035
	Lithium	NE	<0.005	<0.0050	0.0042 J	0.0038 J	0.0032 J	< 0.0032	< 0.0011	0.0044 J	0.0056 J
	Mercury	NE	0.00013 J	<0.0002	< 0.0002	< 0.0002	0.00090	0.00090	< 0.000070	0.00015 J	0.00022
	Molybdenum	NE	0.059	0.037	0.016	0.01 J	0.015	0.015	0.0080 J	0.0083 J	< 0.00085
	Selenium	0.05	0.037	0.025	0.012	0.0063	0.011	0.011	0.0098	0.0077	0.0025
	Thallium	0.002	0.001	0.00072	0.00066	0.00059	0.00063	0.00062	0.00051	0.00050	0.00029 J
	Radium 226 and 228	5	9.18	5.83	6.56	5.33	7.71 J	7.87 J	6.18 J	4.96 J	5.38 J

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
4. J Value 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 (J value) is qualified by the laboratory as an estimated number.
5. NE 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.
6. TDS indicates total dissolved solids.
7. < 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 preceded by < is qualified by the laboratory as estimated.
8. Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
9. -- indicates the value was not reported

Table 3. Summary of Background Groundwater Analytical Data
 Plant McIntosh Inactive Landfill No. 3
 Summary of Background Groundwater Analytical Data

Substance	MCL/ (SMCL)	Well ID								
		GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6	GWC-6
		9/1/16	1/27/17	7/20/17	9/22/17	1/10/18	3/29/18	7/11/18	10/09/18	
Appendix III	Boron	NE	<0.05	<0.050	<0.05	<0.05	<0.02	<0.021	<0.021	<0.021
	Calcium	NE	1.9	0.14	1.5	1.3	1.0	1.5	1.6	1.5
	Chloride	250	--	8.3	7.2	6.8	6.9	7.4 J	7.2	7.6
	Fluoride	4	--	<0.20	<0.2	<0.2	<0.08	<0.082	<0.082	<0.082
	pH	NE	5.00	5.02	5.27	4.99	5.25	5.14	5.13	4.93
	Sulfate	250	--	1.2	0.84 J	1.1	0.95 J	0.78 J	0.78 J	0.79 J
	TDS	500	--	58	64	66	54	78 J	78 J	70
Appendix IV	Antimony	0.006	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010
	Arsenic	0.01	0.0011 J	<0.0013	0.00062 J	<0.0013	<0.00046	<0.00046	<0.00046	<0.00046
	Barium	2	0.075	0.046	0.045	0.04	0.027	0.044	0.051	0.041
	Beryllium	0.004	0.0006 J	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034
	Cadmium	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.00034	<0.00034	<0.00034	<0.00034
	Chromium	0.1	0.0069	<0.0025	<0.0025	0.0015 J	<0.0011	<0.0011	0.0011 J	<0.0011
	Cobalt	NE	0.0014 J	0.00052 J	0.00062 J	0.00048 J	<0.00040	0.00052 J	0.00064 J	0.00052 J
	Lead	0.015	0.0060	<0.0013	<0.0013	0.00042 J	<0.00035	<0.00035	0.00037 J	<0.00035
	Lithium	NE	0.011	0.0085	0.0088	0.0079	0.0073	0.012 J	0.0092	0.0090 J
	Mercury	NE	0.00089 J	<0.0002	<0.0002	<0.0002	<0.000070	<0.000070	<0.000070	<0.000070
	Molybdenum	NE	<0.015	<0.015	<0.01	<0.01	<0.00085	<0.00085	<0.00085	<0.00085
	Selenium	0.05	<0.0013	<0.0013	<0.0013	<0.0013	<0.00024	<0.00024	<0.00024	<0.00024
	Thallium	0.002	0.000095 J	<0.00050	<0.0005	<0.0005	<0.000085	<0.000085	<0.000085	<0.000085
	Radium 226 and 228	5	--	--	0.94	0.93	0.55 J	0.733 J	0.542 J	<0.392

Notes:

- MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
- (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
- Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L). pH results are reported in standard units (S.U.).
- J Value 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 (J value) is qualified by the laboratory as an estimated number.
- NE 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.
- TDS indicates total dissolved solids.
- < 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 preceded by < is qualified by the laboratory as estimated.
- Appendix III = indicator parameters evaluated during Background and Detection Monitoring; Appendix IV = parameters evaluated during Background Monitoring.
- indicates the value was not reported

Table 4. Summary of Detection Groundwater Analytical Data
2019 Annual Groundwater Monitoring and Corrective Action Report
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Location Name				GWA-1A		GWA-2A		GWA-2B		GWA-3A		GWA-3B		GWA-4		GWA-5		GWA-7		GWA-7-FILTERED	GWA-7A	
Sample Date				1/30/2019	3/27/2019	1/30/2019	3/27/2019	1/30/2019	3/28/2019	1/30/2019	3/28/2019	1/30/2019	3/28/2019	1/30/2019	3/28/2019	1/30/2019	3/27/2019	1/30/2019	3/28/2019	3/28/2019	1/30/2019	3/28/2019
Analyte	CAS No.	Units	MCL																			
Field Parameters																						
Specific Conductivity	COND	uS/cm	NE	64.85	51.61	79.81	74.70	220.82	211.40	81.01	73.95	58.21	62.23	50.24	41.28	72.94	89.48	40.75	38.30	--	252.14	205.20
ORP	ORP	mg/L	NE	332.31	1.02	66.92	0.49	54.19	0.15	74.04	2.17	62.44	5.63	56.20	6.39	95.25	0.67	71.90	0.62	--	30.75	0.14
DO	DO	mV	NE	0.97	138.98	0.39	104.70	0.17	132.00	4.95	151.19	8.59	150.14	5.80	175.10	3.69	159.63	1.02	132.80	--	0.58	4.50
pH	pH	s.u.	NE	5.17	5.09	5.42	5.43	5.08	4.93	4.88	4.88	5.13	5.22	4.94	4.99	4.72	4.56	4.96	5.15	--	5.15	5.62
Temperature	TEMP	deg c	NE	16.61	18.69	15.43	18.86	15.41	16.96	16.23	19.37	15.82	16.65	14.66	15.80	15.22	18.51	15.38	18.88	--	15.57	20.52
Turbidity	TURB	ntu	NE	4.30	0.60	1.30	1.16	2.57	0.88	2.87	5.71	6.68	3.49	1.84	1.48	4.71	4.88	4.96	21.60	--	2.43	1.48
Appendix III Parameters																						
Boron	7440-42-8	mg/L	NE	< 0.030	< 0.021	< 0.030	< 0.021	0.77	0.83	< 0.030	0.024 J	0.041 J	0.027 J	< 0.030	< 0.021	0.030 J	0.036 J	< 0.030	< 0.021	< 0.021	1.5	1.4
Calcium	7440-70-2	mg/L	NE	1.9	1.6	3.5	3.4	16	16	2.4	2.4	3.6	4.4	1.0	0.98	1.7	3.1	2.0	4.2	1.5	15	18
Chloride	16887-00-6	mg/L	250**	8.2	8.1	13	12	7.3	6.1	15	15	5.8	5.7	6.9	5.7	6.5	9.1	6.5	5.5	5.6	7.1	6.1
Fluoride	16984-48-8	mg/L	4	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	0.052 J	0.038 J	0.029 J	< 0.026	0.089 J	0.10 J	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026
pH	pH	s.u.	NE	5.17	5.09	5.42	5.43	5.08	4.93	4.88	4.80	5.13	5.22	4.94	4.99	4.72	4.56	4.96	5.15	--	5.15	5.62
Sulfate	14808-79-8	mg/L	250**	1.2	< 0.38	< 0.38	< 0.38	74	71	0.41 J	0.44 J	7.2	7.9	3.5	3.0	15	20	< 0.38	0.49 J	< 0.38	85	85
Total Dissolved Solids	TDS	mg/L	500**	82	66	68	75	140	150	41	36	53	55	40	24	67	70	130	87	56	180	170
State Compliance Parameters																						
Barium	7440-39-3	mg/L	2	0.024	0.021	0.042	0.039	0.041	0.035	0.071	0.068	0.053	0.042	0.040	0.041	0.079	0.12	0.036	0.014	0.031	0.10	0.10
Beryllium	7440-41-7	mg/L	0.004	0.00026 J	< 0.00034	0.00037 J	< 0.00034	0.0019 J	0.0017 J	0.00051 J	0.00046 J	0.00030 J	< 0.00034	0.00019 J	< 0.00034	0.00024 J	< 0.00034	0.00047 J	< 0.00034	< 0.00034	0.00047 J	0.00034 J
Chromium	7440-47-3	mg/L	0.1	0.0061 J	0.0044	< 0.0025	0.0015 J	0.0030 J	0.0017 J	0.0050 J	0.0037	0.0070 J	< 0.0011	0.00088 J	< 0.0011	0.0014 J	< 0.0011	0.01	0.0048	0.011	< 0.00063	< 0.0011
Cobalt	7440-48-4	mg/L	NE	0.00038 J	< 0.00040	0.00050 J	< 0.00040	0.0044	0.0046	0.0014 J	0.0014 J	0.0019 J	< 0.00040	0.00092 J	0.00089 J	0.00076 J	0.0012 J	0.0012 J	< 0.00040	0.00086 J	0.0047	0.0045
Copper	7440-50-8	mg/L	1.0**	< 0.0013	< 0.0021	0.0018 J	< 0.0021	0.0035	0.0031	< 0.0013	< 0.0021	0.0015 J	< 0.0021	< 0.0013	< 0.0021	< 0.0013	< 0.0021	0.0016 J	< 0.0021	< 0.0021	0.0018 J	< 0.0021
Lead	7439-92-1	mg/L	0.015	0.00021 J	< 0.00035	< 0.000094	< 0.00035	0.00028 J	< 0.00035	0.00034 J	0.00038 J	0.001	0.00052 J	0.00013 J	< 0.00035	0.00064 J	0.0012 J	0.0021	< 0.00035	0.0019	< 0.000094	< 0.00035
Vanadium	7440-62-2	mg/L	NE	< 0.0025	< 0.0029	< 0.0025	< 0.0025	< 0.0025	< 0.0014	< 0.0025	< 0.0014	0.0043 J	< 0.0028	< 0.00090	< 0.0014	0.0019 J	< 0.0082	0.0043	< 0.0063	< 0.0094	< 0.00090	< 0.0053
Zinc	7440-66-6	mg/L	5**	< 0.0024	< 0.0065	0.0051 J	< 0.0065	0.013 J	0.014 J	0.0058 J	< 0.0065	0.0041 J	< 0.0065	0.0060 J	< 0.0065	0.0057 J	0.010 J	0.014 J	< 0.0065	0.0066 J	0.011 J	0.0086 J

Location Name				GWC-1				GWC-2				GWC-3		GWC-4A		GWC-5		GWC-6	
Sample Date				1/30/2019	Jan.19-DUP	3/28/2019	Mar.19-DUP	1/31/2019	Jan.19-DUP	3/28/2019	Mar.19-DUP	1/30/2019	3/28/2019	1/30/2019	3/28/2019	1/31/2019	3/28/2019	1/31/2019	3/28/2019
Analyte	CAS No.	Units	MCL																
Field Parameters																			
Specific Conductivity	COND	uS/cm	NE	37.26				37.87				65.04		63.16		56.59		57.99	
ORP	ORP	mg/L	NE	81.51				1.29				99.85		3.19		321.41		1.12	
DO	DO	mV	NE	1.40				152.64				3.04		163.23		0.90		147.59	
pH	pH	s.u.	NE	4.81				4.99				5.38		5.38		4.91		5.08	
Temperature	TEMP	deg c	NE	17.67				17.89				16.78		21.51		17.82		19.22	
Turbidity	TURB	ntu	NE	1.19				1.89				0.84		0.92		1.17		1.23	
Appendix III Parameters																			
Boron	7440-42-8	mg/L	NE	< 0.030	< 0.030	0.021 J	< 0.021	0.040 J	0.038 J	0.062	0.042 J	< 0.030	< 0.021	< 0.030	< 0.021	< 0.030	< 0.021	< 0.030	< 0.021
Calcium	7440-70-2	mg/L	NE	0.24 J	0.21 J	0.15 J	0.16 J	4.8	4.5	4.9	4.7	2.0	2.0	0.34	0.30	7.5	7.2	1.9	1.5
Chloride	16887-00-6	mg/L	250**	4.9	4.8	4.1	4.1	5.2	5.2	4.6	4.7	10	8.8	12	11	8.0	7.5	8.5	6.9
Fluoride	16984-48-8	mg/L	4	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	0.026 J	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	0.063 J	0.027 J	< 0.026	< 0.026	< 0.026
pH	pH	s.u.	NE	4.81				4.99				5.38		5.38		4.91		5.08	
Sulfate	14808-79-8	mg/L	250**	0.58 J	0.74 J	0.67 J	0.71 J	0.57 J	0.48 J	< 0.38	0.43 J	< 0.38	< 0.38	0.90 J	1.1	4.8	3.0	0.86 J	0.96 J
Total Dissolved Solids	TDS	mg/L	500**	24	34	25 J	< 10 J	45	45	45	34	33	44	37	28	180	110	84	62
State Compliance Parameters																			
Barium	7440-39-3	mg/L	2	0.018 J	0.013 J	0.014	0.014	0.067	0.067	0.064	0.064	0.037	0.035	0.027	0.028	0.45	0.45	0.053	0.045
Beryllium	7440-41-7	mg/L	0.004	0.000090 J	< 0.000057	< 0.00034	< 0.00034	0.000065 J	0.000087 J	< 0.00034	< 0.00034	0.00033 J	< 0.00034	0.000070 J	< 0.00034	0.0012 J	0.0017 J	0.00012 J	< 0.00034
Chromium	7440-47-3	mg/L	0.1	< 0.0025	0.00092 J	< 0.0011	< 0.0011	0.0061 J	0.0057 J	0.0049	0.0047	0.0047 J	0.0037	< 0.00063	< 0.0011	< 0.0025	< 0.0011	< 0.0025	0.0019 J
Cobalt	7440-48-4	mg/L	NE	0.00023 J	0.00013 J	< 0.00040	< 0.00040	0.00092 J	0.00088 J	0.00072 J	0.00076 J	0.00051 J	0.00041 J	0.00038 J	< 0.00040	0.013	0.013	0.00076 J	0.00070 J
Copper	7440-50-8	mg/L	1.0**	< 0.0013	< 0.0013	< 0.0021	< 0.0021	< 0.0013	< 0.0013	< 0.0021	< 0.0021	< 0.0013	< 0.0021	< 0.0013	< 0.0021	< 0.0013	< 0.0021	< 0.0013	< 0.0021
Lead	7439-92-1	mg/L	0.015	< 0.000094	< 0.000094	< 0.00035	< 0.00035	< 0.0010	< 0.0010	< 0.00035	< 0.00035	< 0.000094	< 0.00035	< 0.000094	< 0.00035	< 0.0010	< 0.00035	< 0.0010	0.00052 J
Vanadium	7440-62-2	mg/L	NE	< 0.00090	< 0.00090	< 0.0025	< 0.0042	< 0.0025	< 0.00090	< 0.0059	< 0.0048	< 0.0025	< 0.0070	< 0.00090	< 0.0014	< 0.0025	< 0.0070	< 0.0025	< 0.0047
Zinc	7440-66-6	mg/L	5**	< 0.0024	< 0.0024	< 0.0065	< 0.0065	< 0.020	< 0.020	0.0069 J	< 0.0065	0.0033 J	< 0.0065	0.0042 J	< 0.0065	0.033 J	0.032	< 0.020	0.0084 J

General Notes:

Bolded - detected value
 *EPA Action Level; **Georgia secondary drinking water standard established by EPA as a general guideline only (not enforced)
 uS/cm - microsiemens per centimeter
 MCL -Maximum Contaminant Level
 mg/L - milligrams per liter
 mV - millivolts
 NE - not established
 ntu - nephelometric turbidity units
 s.u. - Standard Units

Appendix III parameters were added to the semiannual groundwater monitoring program in the approved August 2017 minor modification request.

State-required parameters required by the Georgia EPD per MPM on Design & Operation Plan for Landfill No. 3, dated August 1999.

Total metals analysis was performed. Temperature, specific conductance, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured and recorded in the field.

Validator Qualifiers:

The data presented in this table are representative of the validated data, and not necessarily that which is included in the laboratory reports.
 < = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 J - The result is an estimated value.

Table 5. Summary of Groundwater Elevations
2019 Annual Groundwater Monitoring and Corrective Action Report
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Well ID	Top of Casing Elevation (ft NAVD)	Groundwater Elevations (ft NAVD)									
		August 1, 2016	January 1, 2017	July 1, 2017	September 1, 2017	January 8, 2018	March 26, 2018	July 9, 2018	October 8, 2018	January 28, 2019	March 25, 2019
GWA-1	66.93	55.42	60.07	58.62	60.70	57.00	56.09	54.90	53.14	58.19	57.47
GWA-1A	66.78	Not Installed	NM	57.68	59.75	55.94	54.96	53.92	52.16	56.88	56.33
GWA-2	66.19	54.37	57.05	56.74	57.77	55.16	54.33	53.00	51.86	55.75	55.62
GWA-2A	66.34	Not Installed	NM	52.26	54.15	50.19	49.13				
GWA-2B	66.18	Not Installed							47.23	50.75	50.45
GWA-3A	62.79	50.51	53.55	53.51	55.77	51.27	50.01	49.05	47.53	51.98	51.60
GWA-3B	62.80	51.11	57.11	56.24	58.17	55.07	55.02	51.75	49.14	56.37	55.69
GWA-4	62.01	49.95	53.29	53.17	55.51	50.73	49.27	48.38	46.89	51.59	50.96
GWA-5	60.43	49.36	53.04	52.94	55.16	50.54	48.80	47.88	47.14	51.80	50.74
GWA-7	67.80	52.49	55.15	55.23	57.39	53.05	51.88	51.25	49.65	53.74	53.41
GWA-7A	68.18	Not Installed							45.99	52.32	49.11
GWC-1	66.08	49.74	52.87	53.02	55.76	50.25	48.53	47.98	46.58	50.72	50.31
GWC-2	64.21	48.81	52.26	52.23	54.88	49.49	47.60	46.96	45.78	50.86	49.40
GWC-3	66.91	47.97	50.35	50.95	53.46	48.10	46.40	46.31	45.10	48.32	48.26
GWC-4A	66.62	49.54	52.89	52.92	55.76	50.09	48.21	47.61	46.08	51.04	50.00
GWC-4B	66.83	52.70	55.54	55.61	59.01	53.14	DRY	DRY	DRY	DRY	DRY
GWC-5	68.08	51.30	55.45	55.67	58.83	52.62	51.00	50.42	48.97	53.05	51.92
GWC-6	68.51	50.03	52.95	53.42	55.71	50.54	48.55	48.47	47.11	50.70	50.63
PZ-1	67.64	Not Installed							46.08	49.62	49.38
PZ-2	67.50	Not Installed							46.40	50.52	50.04
PZ-3	61.30	Not Installed							46.49	51.43	51.29

Notes:

NM: Not Measured

ft - feet

Elevations are in feet relative to North American Vertical Datum (NAVD)88

GWA-1A was installed as a replacement well for GWA-1 in January 2017.

GWA-2A was installed as a replacement well for GWA-2 in January 2017.

GWA-2B was installed as a proposed replacement well for GWA-2 and GWA-2A in August 2018.

GWA-7A was installed as a proposed replacement well for GWA-7 in August 2018.

Table 6. Groundwater Flow Velocity Calculations
2019 Annual Groundwater Monitoring and Corrective Action Report
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Monitoring Wells	h_1	h_2	K (ft/day)	n_e	dh (ft)	dl (ft)	i (ft/ft)	Velocity (ft/day)	Velocity (ft/year)
GWA-1A and PZ-2	56.33	50.04	2.24	0.20	6.29	915	0.0069	0.077	28.11
GWA-1A and GWC-1	56.33	50.31			6.02	865	0.0070	0.078	28.47
GWA-3A and GWC-2	51.60	49.40			2.20	899	0.0024	0.027	9.86
								Avg. (ft/day)	Avg. (ft/year)
								0.061	22.27

Notes:

ft - feet

h_1 and h_2 - groundwater elevation at location 1 and 2

K - hydraulic conductivity

n_e - effective porosity

dh - difference between h_1 and h_2

dl - distance between locations 1 and 2

i - hydraulic gradient (dh/dl)

Velocity = linear velocity = Ki/n_e

Georgia Power Company
2019 Annual Groundwater Monitoring and Corrective Action
Report
Plant McIntosh Inactive Landfill No. 3
Permit No. 051-008D(L)(I)
August 2019

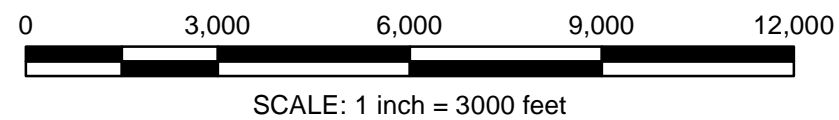
Figures



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- Inactive CCR Landfill No. 3 Approximate Boundary
- Plant McIntosh Approximate Property Boundary



Annual Groundwater Monitoring and Corrective Action Report
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Georgia Power Company
 Atlanta, Georgia



PLANT MCINTOSH
 SITE LOCATION MAP

Project No. 1800205





Prepared June 2019

Fig. 1

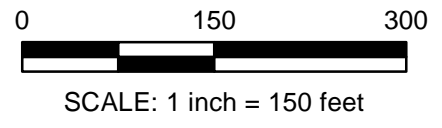



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

-  Downgradient Monitoring Well
-  Piezometer
-  Upgradient Monitoring Well
-  Proposed For Abandonment

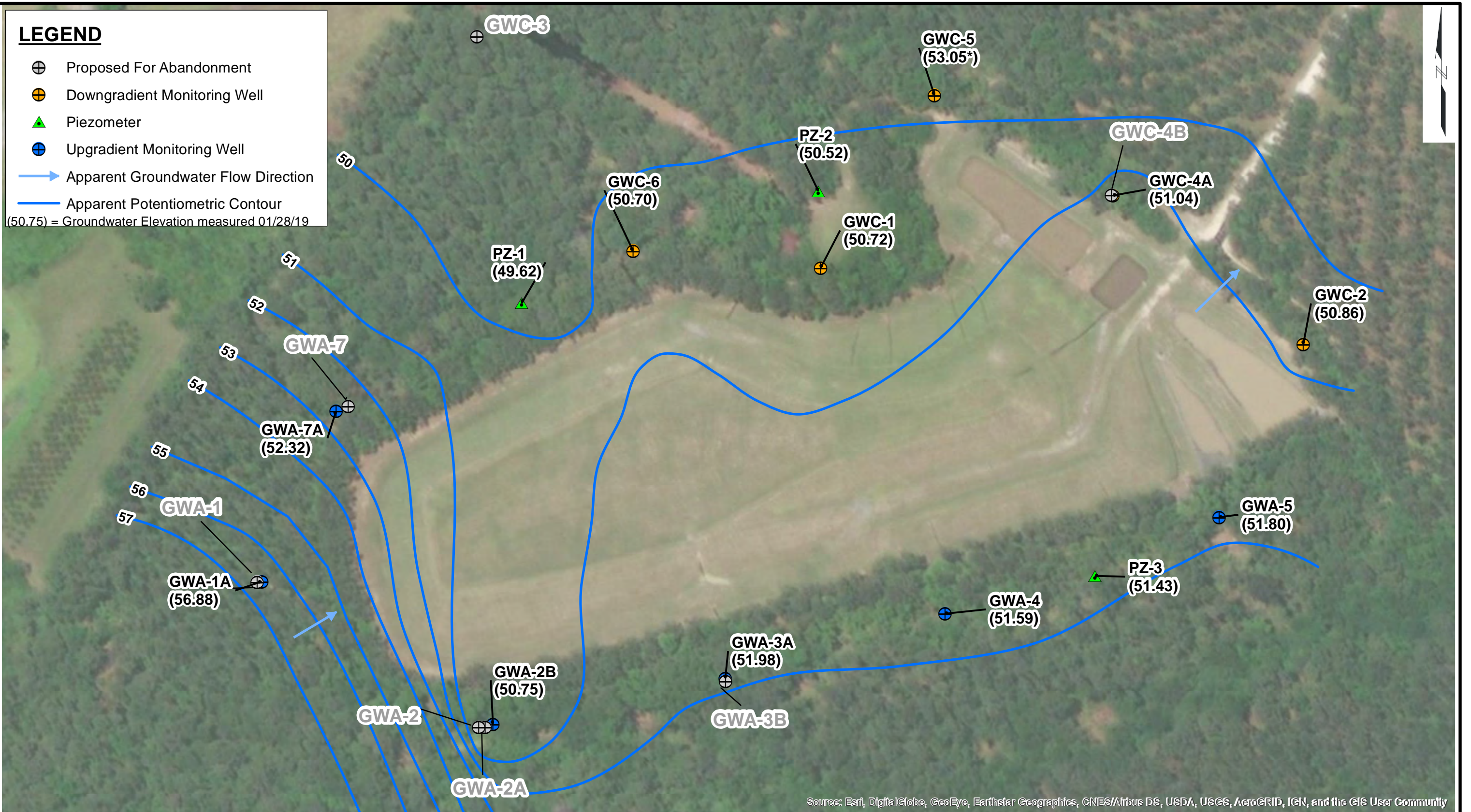
GWA-1, GWA-2, GWA-2A, GWA-3B, GWA-7, GWC-3, and GWC-4B are proposed for abandonment.



Annual Groundwater Monitoring and Corrective Action Report Plant McIntosh Inactive CCR Landfill No. 3 Effingham County, Georgia		WELL LOCATION MAP
Georgia Power Company Atlanta, Georgia	Project No. 1800205	Prepared June 2019 Fig. 2

LEGEND

- ⊕ Proposed For Abandonment
 - ⊕ Downgradient Monitoring Well
 - ▲ Piezometer
 - ⊕ Upgradient Monitoring Well
 - Apparent Groundwater Flow Direction
 - Apparent Potentiometric Contour
- (50.75) = Groundwater Elevation measured 01/28/19

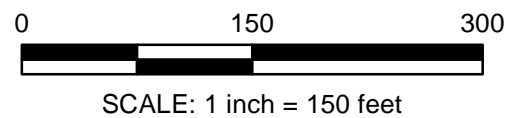



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

NOTES







GWC-5 was not used in contouring.
 GWA-1, GWA-2, GWA-2A, GWA-3B, GWA-7, GWC-3, and GWC-4B
 are proposed for abandonment.

Elevations are in feet relative to North American
 Vertical Datum (NAVD) 88



Annual Groundwater Monitoring and Corrective Action Report Plant McIntosh Inactive CCR Landfill No. 3 Effingham County, Georgia		POTENTIOMETRIC SURFACE CONTOUR MAP JANUARY 2019
Georgia Power Company Atlanta, Georgia	Project No. 1800205	Prepared February 2019 Fig. 3

LEGEND

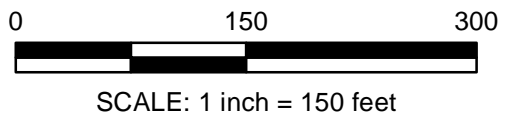
-  Downgradient Monitoring Well
 -  Piezometer
 -  Upgradient Monitoring Well
 -  Proposed For Abandonment
 -  Apparent Potentiometric Surface Contour
 -  Apparent Groundwater Flow Direction
- (50.45) = Groundwater Elevation measured 03/25/19




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

NOTES
 GWC-5 was not used in contouring.
 GWA-1, GWA-2, GWA-2A, GWA-3B, GWA-7, GWC-3, and GWC-4B are proposed for abandonment.

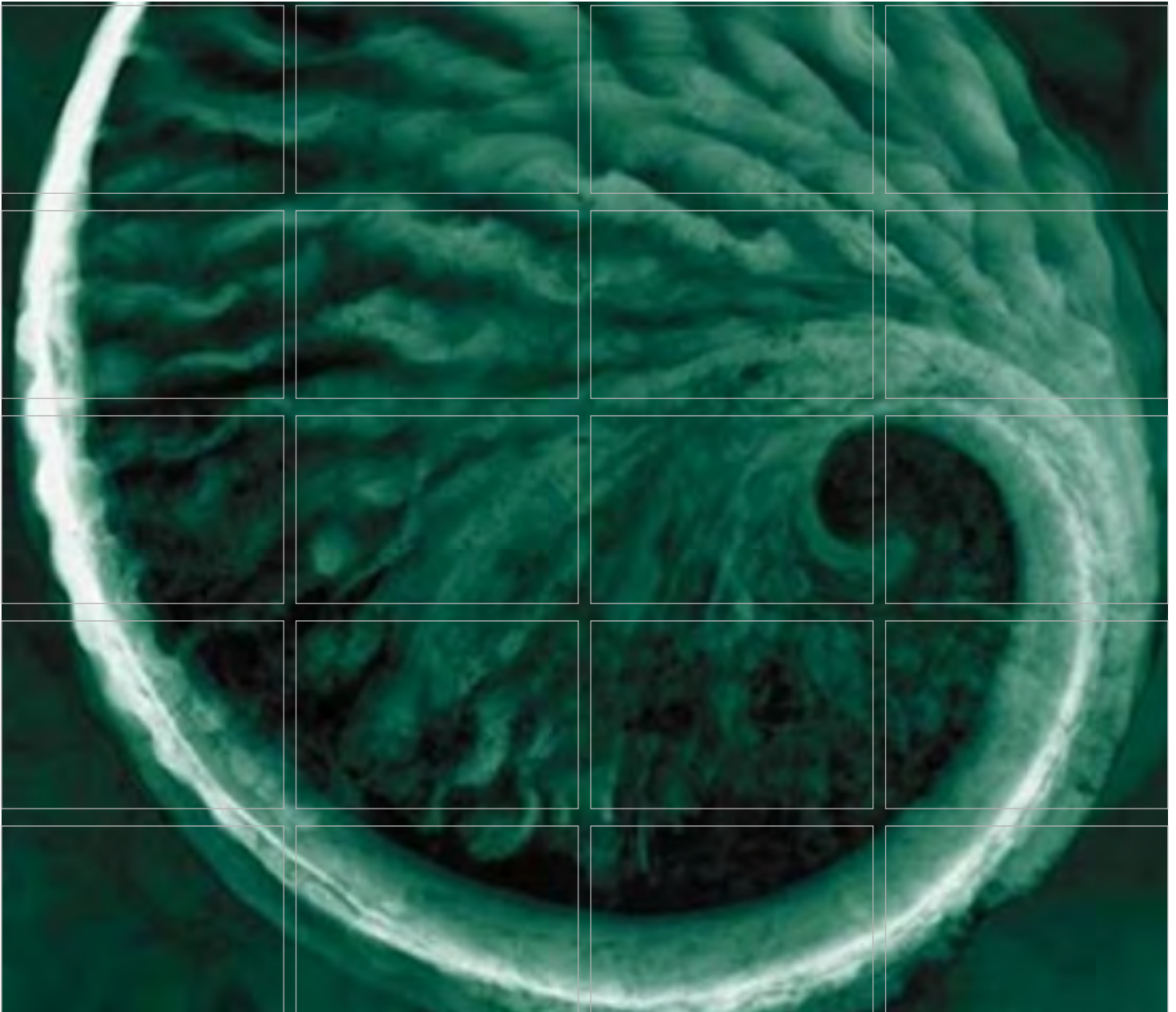
Elevations are in feet relative to North American Vertical Datum (NAVD) 88



2019 Semiannual Groundwater Monitoring and Corrective Action Report Plant McIntosh Inactive CCR Landfill No. 3		POTENTIOMETRIC SURFACE CONTOUR MAP MARCH 2019
Georgia Power Company Atlanta, Georgia	Project No. 1800205	Prepared May 2019 Fig. 4

Appendix A

ASD



Prepared for:

*Georgia Power
Company*

ALTERNATE SOURCE DEMONSTRATION

Plant McIntosh Ash Disposal Site No. 3
Permit No. 051-008D (LI)

August 2017

www.erm.com

Georgia Power Company

ALTERNATE SOURCE DEMONSTRATION

Plant McIntosh
Ash Disposal Site No. 3
Permit No. 051-008D (LI)

August 9, 2017



Hunter Sartain, P.E.
Principal



Greg Jirak, P.G.
Project Manager



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



TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	HISTORICAL MONITORING	1
1.3	BASIS OF THE STATISTICALLY SIGNIFICANTLY INCREASE	1
2.0	ALTERNATE SOURCE DEMONSTRATION	2
2.1	GEOLOGY OF COASTAL PLAIN	2
2.1.1	Occurrence of Barium	2
2.2	SURFACE HYDROLOGY NEAR GWC-5	3
2.3	GEOCHEMISTRY AND ANALYTICAL DATA	3
2.4	SUPPLEMENTAL ANALYTICAL DATA	4
3.0	CONCLUSIONS AND RECOMMENDATIONS	4
4.0	REFERENCES	5

FIGURES

1. Site Location Map
2. Potentiometric Surface Map January 10, 2017
3. Barium Concentration and Groundwater Elevation at GWC-5
4. Barium Concentration and Specific Conductance at GWC-5

TABLES

1. GWC-5 Groundwater Field Parameters
2. GWC-5 CCR Parameters

APPENDICES

- A. Technical Memorandum

ACRONYMS

ASD – Alternate Source Demonstration

CCR – coal combustion residual

D&O – Design & Operation

ERM – Environmental Resources Management

GA – Georgia

GPC – Georgia Power Company

MCL – maximum contaminant level

$\mu\text{S/cm}$ – microsiemens per centimeter

mg/L – milligrams per liter

K_d – partitioning coefficient

SSI – statistically significant increase

UPL – upper prediction limit

1.0 INTRODUCTION

Statistical analysis of the analytical data from the 2017 first semi-annual groundwater sampling event at GPC's Plant McIntosh Ash Disposal Site No. 3 identified an SSI of barium in monitoring well GWC-5 (ERM, 2017).

Pursuant to the Rule 391-3-4.14(23)(c), this report provides an ASD for the SSI noted above. Based on review of site data, the SSI for barium in well GWC-5 is likely the result of variability in naturally-occurring barium and therefore not indicative of a groundwater impact by the disposal unit. This report provides details regarding the alternate source.

1.1 BACKGROUND

Plant McIntosh is located in southeast Effingham County, Georgia, approximately 4 miles northeast of the city 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 (Site Location Map, Figure 1). Ash Disposal Site No. 3 was closed in 2008 and is currently in post-closure care.

1.2 HISTORICAL MONITORING

A Groundwater Monitoring Plan was submitted and approved in August 1999 and modified February 2010 as part of the facility D&O Plan. The monitoring well network consists of fourteen wells (seven upgradient and seven downgradient) located along the perimeter of Ash Disposal Site No. 3 (Potentiometric Surface Map January 10, 2017, Figure 2). Semi-annual groundwater monitoring began in October 1999 and is routinely performed in compliance with the permit conditions for groundwater monitoring at the site. CCR constituents have been monitored twice since the GA CCR Rule was promulgated.

1.3 BASIS OF THE STATISTICALLY SIGNIFICANTLY INCREASE

Data from the 2017 first semi-annual groundwater monitoring event utilized the most recent measured concentration for analytes at each downgradient well and calculated a UPL using interwell methods. One exceedance of the UPL was found at one monitoring well location. The exceedance was identified as an SSI for barium in well GWC-5. No exceedances of the MCL were identified in the data.

The 2017 First Semi-Annual Groundwater Monitoring Report (ERM, 2017) describes the statistical methods utilized to evaluate data sampled for the first 2017 semi-annual event. The calculated UPL for barium using the statistical approach identified within that report is 0.33 mg/L. The barium concentration in well GWC-5 for the first 2017 sampling event was 0.42 mg/L. The MCL for barium is 2.0 mg/L.

2.0 ALTERNATE SOURCE DEMONSTRATION

GWC-5 is the only well within the network of 7 downgradient monitoring wells to have a reported SSI during the January 2017 groundwater sampling event. Barium was the only constituent. A landfill release typically results in multiple SSIs in multiple wells. Since there are no other reported SSIs and barium is naturally occurring in soil and groundwater at the site, a localized cause is likely and not a release from the unit. Based on these observations, a review of facility activities and a review of the existing field and analytical data were conducted.

The source of the SSI is the result of variability in naturally-occurring barium and the following details are provided as basis for this demonstration:

- Barium is a naturally occurring at the site and is present in all site groundwater;
- The recent expansion of wetlands near GWC-5 has affected surface hydrology corresponding to changes in groundwater geochemistry and potentiometric surface in GWC-5;
- Field parameter and analytical data demonstrate the relationship between changes to the surface hydrology and increases in barium concentrations; and
- Analytical data are presented to show the presence of barium and the absence of more mobile (lower partitioning coefficient K_d) CCR-related constituents.

2.1 GEOLOGY OF COASTAL PLAIN

Ash Disposal Site No. 3 is situated in the Coastal Plain Province of Georgia. Coastal Plain sediments were deposited from Cretaceous to Pleistocene and consist of stratified marine deposits and materials eroded from crystalline rock of the Piedmont Region, typically clay, silt, sand, which overlay limestone resting on much older igneous and metamorphic basement rocks (Veatch, Stephenson, & Vaughan, 1911).

2.1.1 Occurrence of Barium

Barium has been detected in all monitoring wells and all groundwater samples collected at Ash Disposal Site No. 3 since 1999. The highest concentration of barium detected at Ash Disposal Site No. 3 is 0.491 mg/L (Table 1). Based on information presented below, barium is naturally occurring in local geology, groundwater, and at the site.

Barium is an alkaline earth metal and occurs in nature as a free metal and as salts. Barite ($BaSO_4$) and witherite ($BaCO_3$) are the two most common barium minerals. Barium is commonly found in clays and other silicate minerals (i.e. alkali feldspar, plagioclase, pyroxene, amphibole, and micas) as a result of ion exchange (Choudhury & Cary, 2001). Silicate minerals are commonly found in weathered material from crystalline rock of the Piedmont which has been deposited as Coastal Plain sediments at the site (Clarke & Washington, 1924). In addition

to barium being naturally present in Coastal Plain sediments, barium is naturally occurring in groundwater in the Coastal Plain (Lee, 1993).

2.2 SURFACE HYDROLOGY NEAR GWC-5

Site personnel removed trees and brush in 2013 and 2015, and the access road was repaired north of the Ash Disposal Site No. 3 in March 2016 after washouts made it inaccessible. These site activities have altered the surface hydrology and drainage at the site.

A technical memorandum (memo) dated 26 May 2017 documents the findings from a site visit conducted on 15 May 2017, including a large emergent / scrub-shrub wetland within the area north of Ash Disposal Site No. 3, near GWC-5 (Appendix A). Numerous dead and/or dying pine trees, wetland vegetation, and wrack lines; which are indicative of increasing wetland conditions were observed during the site visit and documented in the memo. A large woody debris pile was observed preventing the outflow of surface water from the area to the north exacerbated by the road repairs in 2016 appear to have created the emergent / scrub-shrub wetland area.

Restricting surface flow within wetlands may create localized groundwater mounding due to preferential infiltration resulting in an increase in groundwater elevations. Following repair of the access road in 2016 preventing outflow of surface water, groundwater elevations increased to historically high levels indicative of this process. Figure 3 (Barium Concentration and Groundwater Elevation at GWC-5) demonstrates a direct relationship between expanding wetlands and increases in groundwater elevation.

Restricted surface water within wetlands, such as the area north of GWC-5, can increase the concentration of dissolved ions in the wetlands system (Seelig, 2009). The following section relates geochemistry to the presence of wetlands at the site.

2.3 GEOCHEMISTRY AND ANALYTICAL DATA

The changes to surface hydrology creating the emerging wetland environment have altered the geochemistry in the groundwater near GWC-5. In wetlands, anaerobic conditions support reducing conditions in the surface water resulting in an increase in dissolved ions due to precipitation/dissolution of compounds previously in equilibrium. As surface water with elevated dissolved ions infiltrate into the subsurface, geochemical changes in the groundwater were observed as increases in specific conductance measurements. Historically high specific conductance measurements recorded during recent groundwater sampling events demonstrate the relationship between increased dissolved ions (such as barium) and the wetlands expansion (Barium Concentration and Specific Conductance at GWC-5, Figure 4).

Historical barium concentrations and field parameters have been collected at GWC-5 since 1999 (Table 1, GWC-5 Groundwater Field Parameters). Figure 4 shows the relationship between barium concentrations and specific conductance data. The following are observations regarding the data as illustrated in Figure 4:

- Barium was observed decreasing in GWC-5 since installation in 1999 until late 2013, at the time tree clearing and road construction activities began. Barium concentrations have generally increased since that time.
- Specific conductance measurements in GWC-5 have historically been observed below 700 $\mu\text{S}/\text{cm}$. However, the 3 most recent measurements have all exceeded 1,000 $\mu\text{S}/\text{cm}$ with the highest value of 9,262 $\mu\text{S}/\text{cm}$. The 3 highest specific conductance measurements directly correspond to the SSIs of barium concentrations in 2016 and 2017.
- Based on the correlations between field measurements and barium concentrations relative to the timing of recent site work and expansion of wetlands, the SSI for barium at GWC-5 is likely naturally occurring barium concentrations present in the geologic formation. Barium dissolution is naturally occurring throughout the site, but is being impacted more specifically at GWC-5 due to recent changes in geochemistry caused by changing surface hydrology local to the area around GWC-5.

2.4 SUPPLEMENTAL ANALYTICAL DATA

GPC has recently conducted additional measurements within wells at the site in preparation for future compliance with the Georgia CCR Rule §391-3-4-.10. Two sampling events have occurred for the State CCR program and results are presented in Table 2 (GWC-5 CCR Parameters). Those constituents presented in Table 2 commonly have a lower partitioning coefficient (K_d) than barium, indicating a higher potential to be present in dissolved form. A landfill release typically results in elevated concentrations of these constituents.

As presented in Table 2, boron, cadmium, copper, and lithium (common leachable ash components and not specifically related to the geologic formation at the site) are not present in the sampling results for GWC-5. Naturally occurring constituents in groundwater such as barium, calcium, and sulfate are reported at elevated concentrations as a result of the geochemical process as discussed in Section 2.3. These results indicate the increased concentration of barium is a result of natural variability enhanced by reducing conditions caused by the wetlands near GWC-5 and not a release from the unit.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Barium was the only detected SSI and was reported at one well, GWC-5, during the 2017 first semi-annual groundwater monitoring event. This single well/ single constituent SSI suggests a localized cause and not a release from the unit. The following data have been provided to demonstrate the SSI reported at GWC-5 is attributed to variability in the naturally-occurring barium caused by changes to surface hydrology and subsequent geochemical changes in the groundwater near the well:

- The expansion of the wetlands coincides with observed changes to surface hydrological conditions influencing changes to the groundwater elevation measured at GWC-5. The

increase in barium concentrations at GWC-5 is concurrent with these observed changes as indicated in Figures 3.

- Anaerobic conditions within a wetlands environment may lead to an increase in dissolved ions (such as barium). High specific conductance measured in groundwater at GWC-5 during recent sampling events is indicative of an increase in dissolved ions. The Increase in barium concentration and specific conductance are concurrent with completion of activities which have resulted in the expansion of wetlands near GWC-5 (Figures 4).
- The absence of more mobile constituents (lower K_d) at GWC-5 typically indicative of a release from a landfill, indicates the source of the barium is natural.

ERM recommends the following actions as a result of this ASD:

- Manage surface water to facilitate water drainage at the site; and
- Continue monitoring GWC-5 to verify that the conclusions of this ASD are still supported by the data.

4.0 REFERENCES

Choudhury, H., & Cary, R. (2001). *2001. Barium and Barium Compounds, Concise International Chemical Assessment Document 33*. Geneva: USEPA, WHO, UNEP.

Clarke, F. W., & Washington, H. S. (1924). *The composition of the Earth's crust, US Geological Survey Professional Paper No. 127*. Washington, D.C. : US Department of the Interior, US Geological Survey.

ERM. (2017). *2017 First Semi-Annual Groundwater Monitoring Report, Plant McIntosh Ash Disposal Site No. 3*. Atlanta.

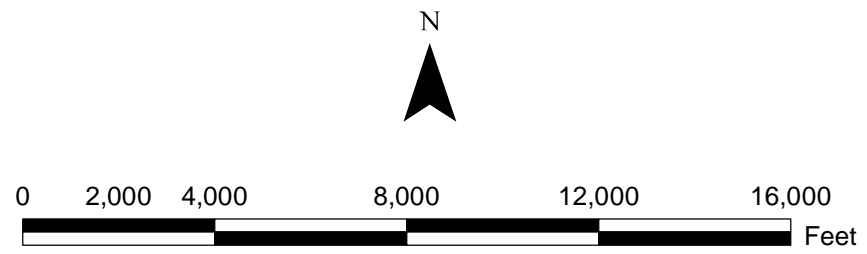
Lee, R. (1993). *Geochemistry of Groundwater in the Southeastern Coastal Plain Aquifer System in Mississippi, Alabama, Georgia, and South Carolina Professional Paper 1410-D*. Washington: U.S. Geological Survey.

Seelig, B. (2009). *Water quality and wetland function in the Northern Prairie Pothole Region*. Fargo: North Dakota State University.

Veatch, J. O., Stephenson, L. W., & Vaughan, T. W. (1911). *Preliminary Report on the Geology of the Coastal Plain of Georgia Bulliten 26*. Atlanta Georgia: Geological Survey of Georgia.



- Legend**
- Approximate Property Boundary
 - Landfill 3



1 inch = 4,000 feet



**Environmental Resources
Management**

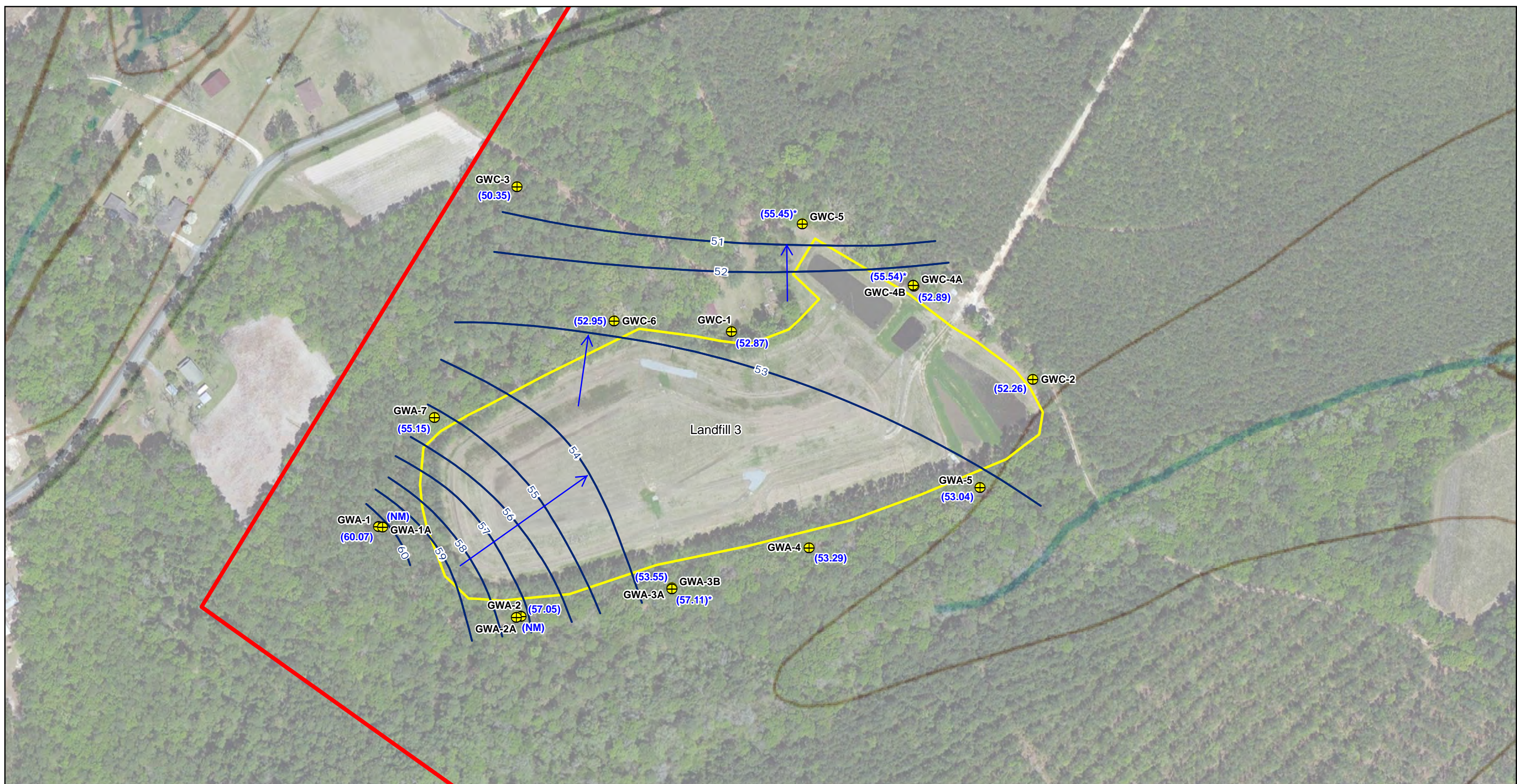
FOR

Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
As Shown	SARpt_F1_McIntshALLUnitSiteLoc	1	As Shown	0

Copyright © 2016 Southern Company Services, Inc. All Rights Reserved. This document contains proprietary, confidential, and/or trade secret information of the subsidiaries of The Southern Company or of third parties. It is intended for use only by employees of, or authorized contractors of, the subsidiaries of the Southern Company. Unauthorized possession, use, distribution, copying, dissemination, or disclosure of any portion is prohibited.

FIGURE 1
SITE LOCATION MAP
PLANT MCINTOSH ASH DISPOSAL SITE No. 3
RINCON, GEORGIA



Legend

- Monitoring Well
- Apparent Potentiometric Surface Contour
- Approximate Property Boundary
- Landfill 3

(53.55) = Groundwater Elevation (01/10/17, FtMSL)
 (NM) = Not Measured
 * = GWC-5, GWA-3B and GWC-4B not used in contouring.



1 inch = 200 feet

Environmental Resources Management

FOR

Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
As Shown	SARpt_F2_LF3GWElev_011017	2	As Shown	0

Copyright © 2016 Southern Company Services, Inc. All Rights Reserved. This document contains proprietary, confidential, and/or trade secret information of the subsidiaries of The Southern Company or of third parties. It is intended for use only by employees of, or authorized contractors of, the subsidiaries of the Southern Company. Unauthorized possession, use, distribution, copying, dissemination, or disclosure of any portion is prohibited.

FIGURE 2
 POTENTIOMETRIC SURFACE MAP
 JANUARY 10, 2017
 PLANT MCINTOSH ASH DISPOSAL SITE NO. 3
 RINCON, GEORGIA

Figure 3.
Barium Concentration and Groundwater Elevation at GWC-5

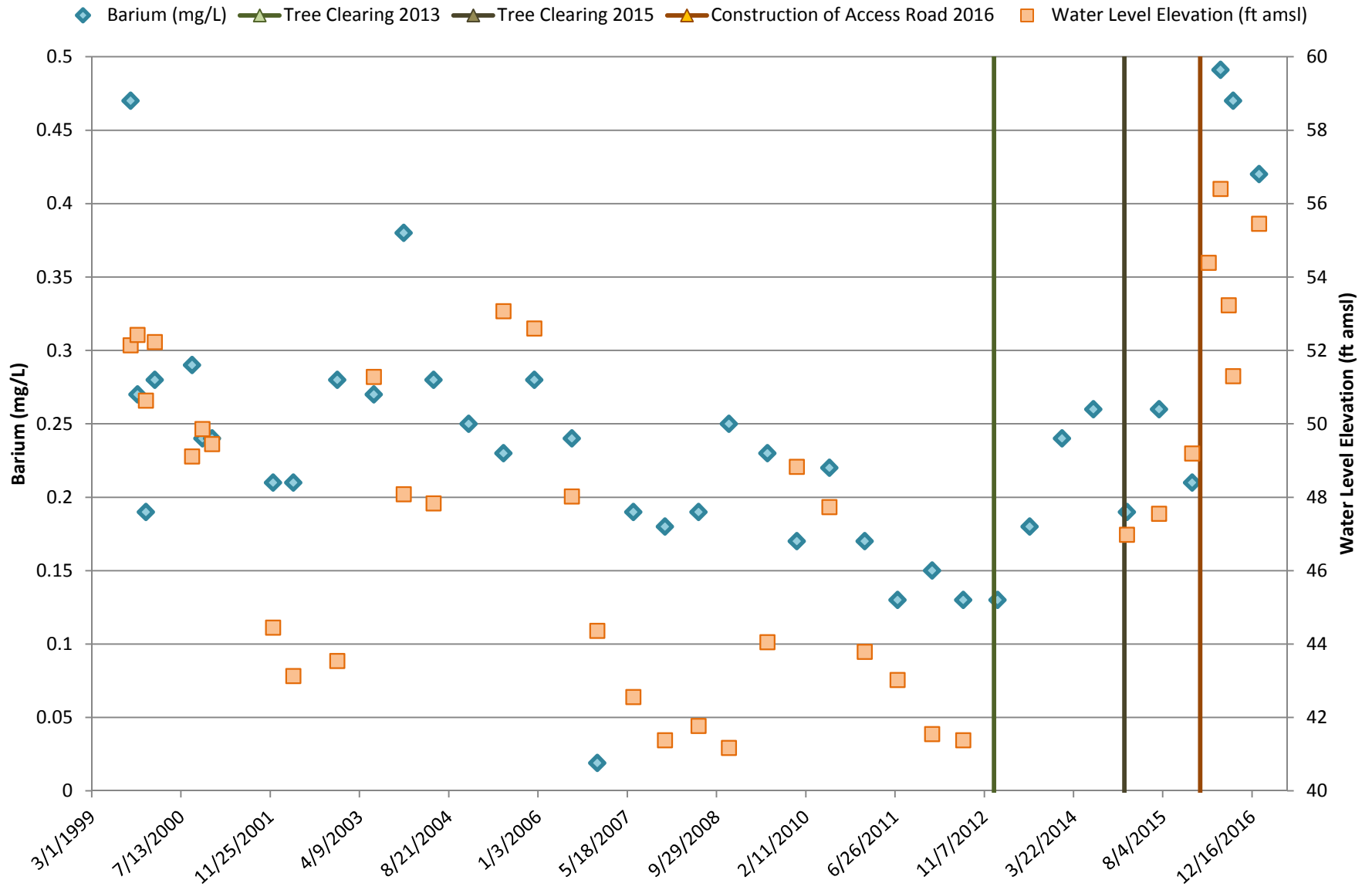


Figure 4.
Barium Concentration and Specific Conductance at GWC-5

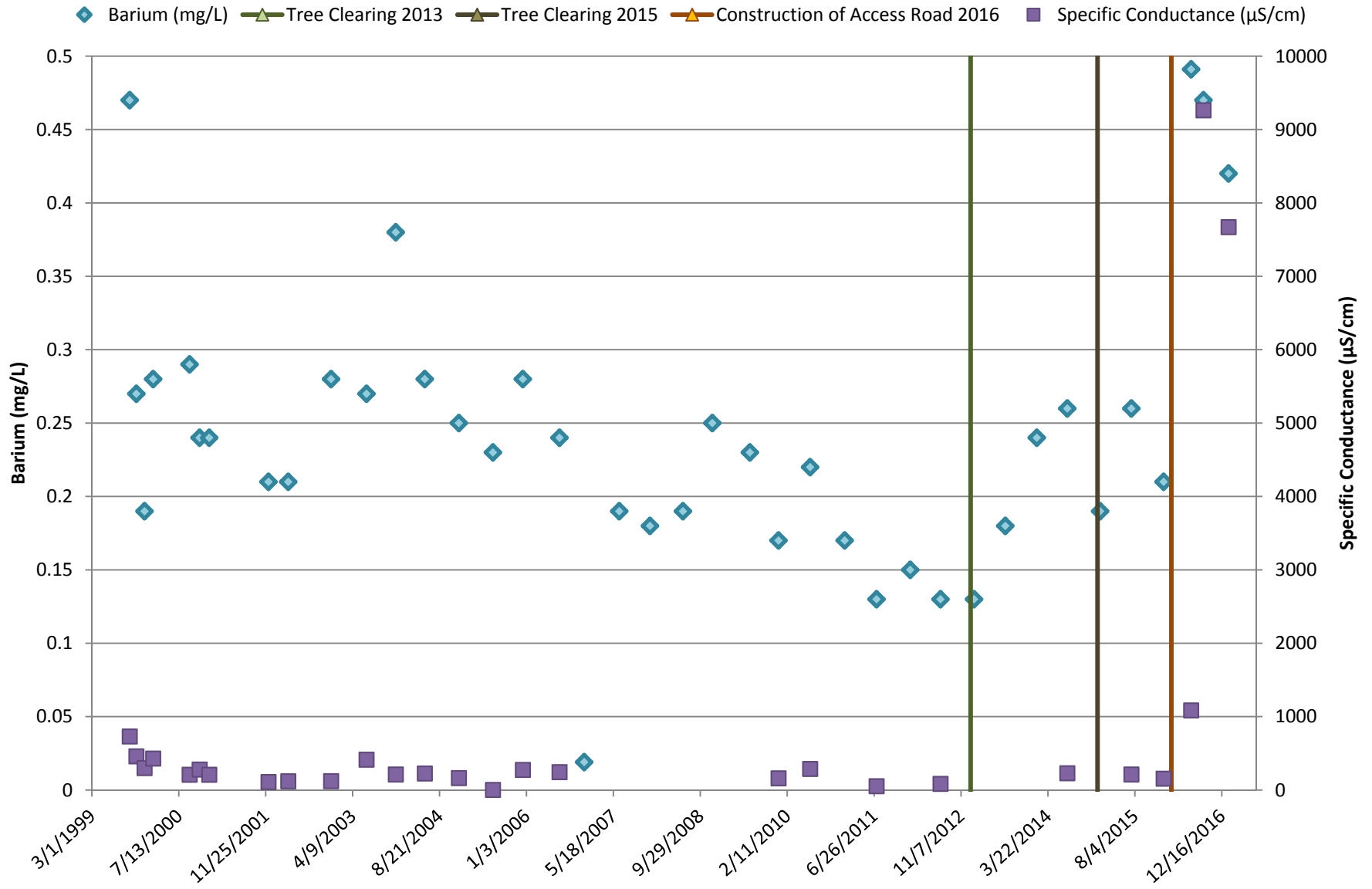


TABLE 1. GWC-5 GROUNDWATER FIELD PARAMETERS

Date	Barium (mg/L)	Specific Conductance (μ S/cm)	pH (S.U.)	Water Level Elevation (ft amsl)
10/5/1999	0.47	730	6.13	52.14
11/12/1999	0.27	460	5.81	52.42
12/29/1999	0.19	300	5.43	50.63
2/17/2000	0.28	430	5.49	52.23
9/13/2000	0.29	210	5.05	49.11
11/10/2000	0.24	280	5.48	49.86
1/4/2001	0.24	210	4.99	49.45
12/11/2001	0.21	110	5.52	44.45
4/4/2002	0.21	120	5.50	43.13
12/6/2002	0.28	121	4.58	43.54
6/28/2003	0.27	414	4.32	51.28
12/13/2003	0.38	212	4.73	48.08
5/28/2004	0.28	226	4.50	47.83
12/10/2004	0.25	164	4.28	na
6/24/2005	0.23	2.41	4.56	53.07
12/13/2005	0.28	274	4.49	52.60
7/12/2006	0.24	245	4.80	48.02
12/1/2006	0.019	na	na	44.36
6/21/2007	0.19	na	na	42.56
12/15/2007	0.18	na	na	41.38
6/21/2008	0.19	na	na	41.77
12/7/2008	0.25	na	na	41.17
7/11/2009	0.23	na	na	44.05
12/23/2009	0.17	160	4.46	48.83
6/23/2010	0.22	288	4.79	47.73
1/8/2011	0.17	na	na	43.79
7/10/2011	0.13	52	5.01	43.02
1/20/2012	0.15	na	na	41.55
7/12/2012	0.13	84	4.49	41.38
1/21/2013	0.13	na	na	na
7/20/2013	0.18	na	na	na
1/17/2014	0.24	na	na	na
7/11/2014	0.26	229	4.83	na
1/16/2015	0.19	na	na	46.98
7/15/2015	0.26	213	4.66	47.55
1/16/2016	0.21	155	5.05	49.19
4/18/2016	na	na	na	54.39
6/23/2016	0.491	1086	6.32	56.40
8/8/2016	na	na	na	53.23
9/1/2016	0.47	9262	7.21	51.30
11/14/2017	na	na	na	55.94
1/24/2017	0.42	7670	8.32	55.45

Notes:

No groundwater sampling was conducted on 4/18/2016, 8/8/2016, 11/14/201

mg/L - milligrams per liter

μ S/cm - microsiemens per centimeter

S.U. - standard units

ft amsl - feet above average mean sea level

na - not available

TABLE 2. GWC-5 CCR PARAMETERS

Sample Date	40 CFR Appendix III to Part 257			40 CFR Appendix IV to Part 257			EPD SW
	Boron	Calcium	Sulfate	Barium	Cadmium	Lithium	Copper
Pre-June 2016	na	na	na	0.13 - 0.47	< 0.005	na	< 0.02
6/23/2016	na	na	na	0.491	na	na	0.0007 J
9/1/2016	< 0.050	21	110	0.47	< 0.0025	< 0.0050	na
1/24/2017	<0.050	10	67	0.42	<0.0025	<0.0050	<0.0025

Notes:

All units milligrams per liter (mg/L)

J = estimated

< 0.0025 = Not Detected at the associated reporting limit

na = not analyzed

40 CFR Appendix II and Appendix IV to Part 257 - Constituents analyzed in compliance with State of Georgia CCR Rule §391-3-4-.10

EPD SW - Constituents sampled as part of Georgia EPD Solid Waste Permit

*Barium is also an EPD Solid Waste Permit constituent

*Cadmium was an EPD Solid Waste Permit constituent from 1999 - 2002

Appendix A
Technical Memorandum

TECHNICAL MEMORANDUM

TO: LAUREN PETTY, P.G. – SOUTHERN CO. SERVICES
FROM: BRIAN ESTES
SUBJECT: PLANT MCINTOSH MONOFIL NO. 3
DATE: MAY 26, 2017

A site visit was conducted on 15 May 2017 for the Plant McIntosh Monofil No. 3 project to evaluate current site conditions and identify potential effects on recent ground water readings within the project area. A wetland approximation was conducted within the area immediately north of the monofil (see Figure 1). A large, emergent / scrub-shrub wetland occurs within this area and appears to be recently expanding. Numerous dead and/or dying pine trees, wetland vegetation and wrack lines were observed, indicative of increasing wetland conditions. Based on reviews of historical aerial imagery, the area was timber harvested / thinned in ~2013 (Figure 2). This area appears to have historically contained two small wetland features surrounded by planted pine plantation. However, the area appears to be expanding beyond its historical footprint. Recent timber harvest / thinning activities may have decreased evapotranspiration rates due to tree removal, which may result in increased surface hydrology. Additionally, along the northern edge of the wetland, a large debris pile consisting of tree limbs may be affecting wetland drainage (see attached Site Photographs). No confined channel drains the wetland areas, as sheet flow / infiltration appear to be the primary drainage. Although it is unknown if increasing hydrology has any effects on groundwater well readings, it is recommended that this debris pile be removed to facilitate site drainage. Any material removed should be placed within an upland area and stabilized with seed / straw. A U.S. Army Corps of Engineers permit would not be required for debris pile removal.

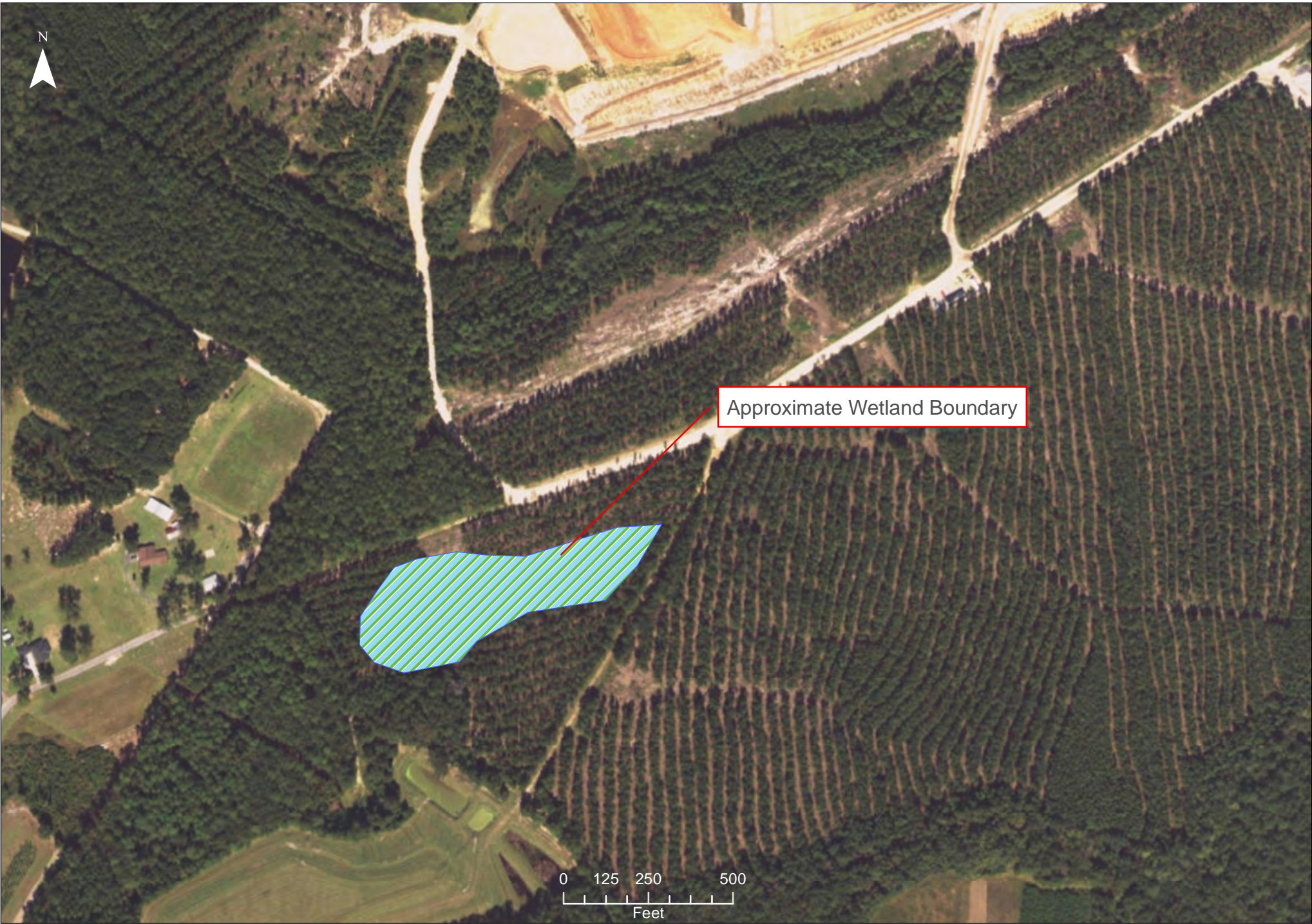
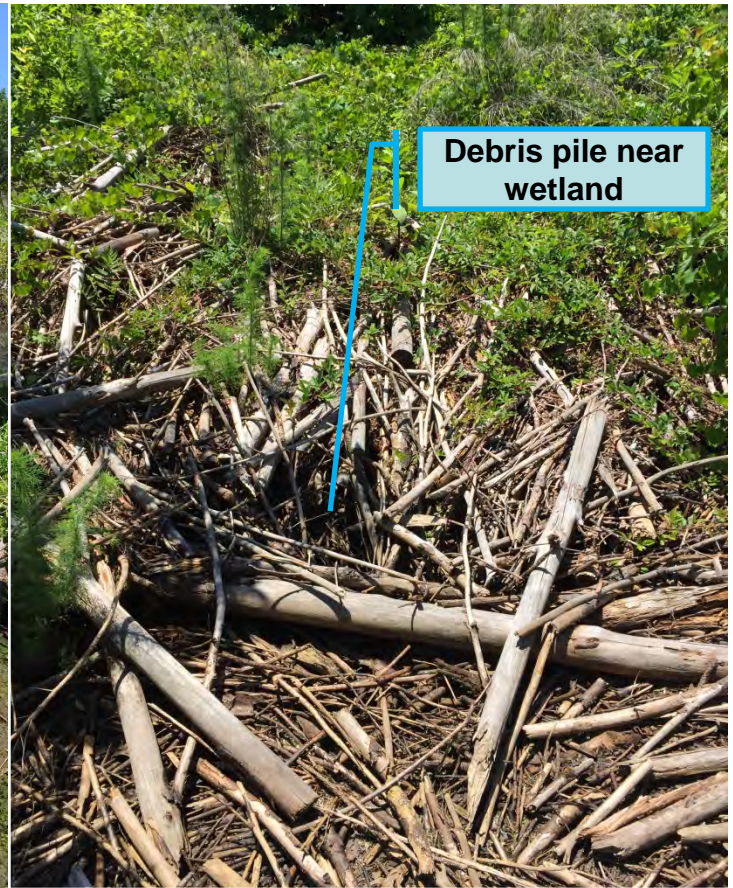




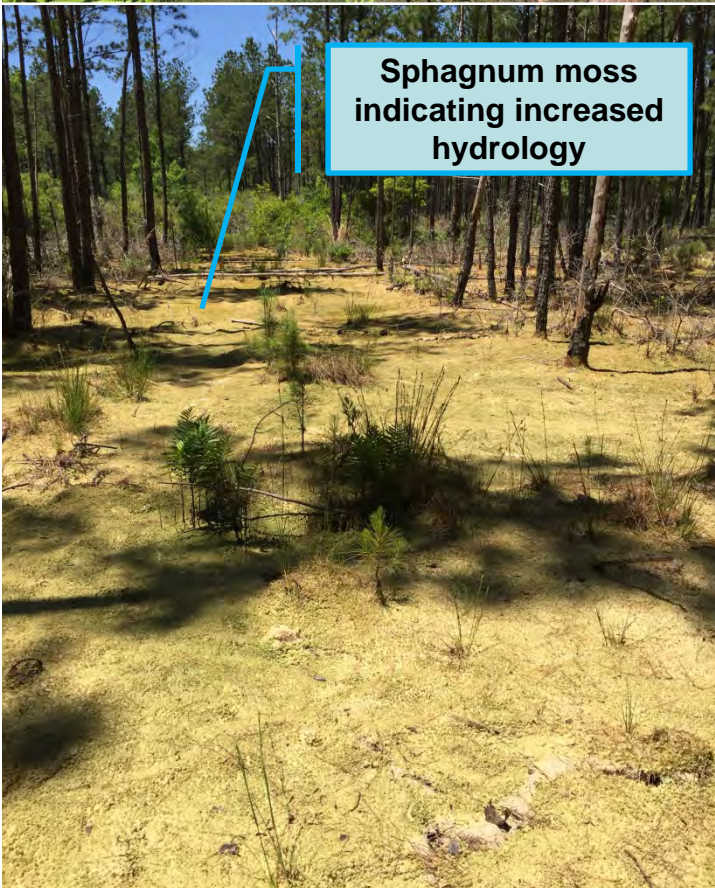
Figure 2. Aerial Imagery Comparisons 2012 / 2014
Plant McIntosh Monofil No. 3
Rincon, Effingham County, Georgia



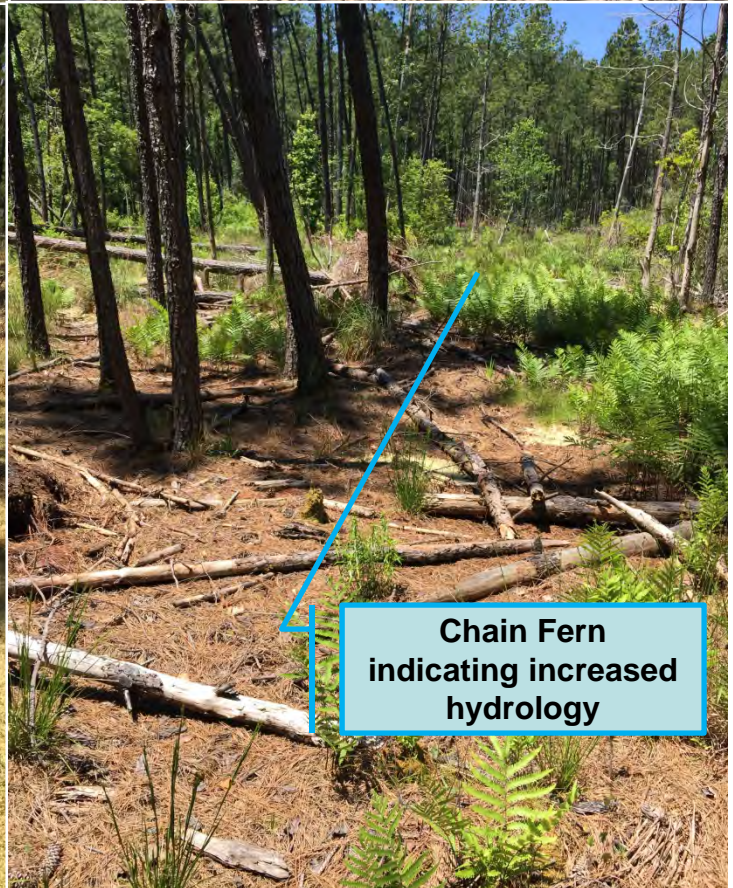
Dead trees in wetland



Debris pile near wetland



Sphagnum moss indicating increased hydrology



Chain Fern indicating increased hydrology

Representative Photographs of Wetland Area near Monofil No. 3
Plant McIntosh Generation Plant
Rincon, Effingham County, Georgia



Georgia Power Company
2019 Annual Groundwater Monitoring and Corrective Action
Report
Plant McIntosh Inactive Landfill No. 3
Permit No. 051-008D(L)(I)
August 2019

Appendix B

Field Sampling, Laboratory Analytical Data, and Data Validation Reports

Product Name: Low-Flow System

Date: 2016-08-31 12:46:40

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name McIntosh LF 3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Pegasus Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 37 ft

Pump placement from TOC 29 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 12.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5051467 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 43.2 in
Total Volume Pumped 28 L

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		+/- 10%	+/- 100
Last 5	12:22:23	14708.70	24.10	4.92	59.03	6.58	15.98	0.91	202.66
Last 5	12:27:23	15008.70	24.24	4.90	58.95	6.13	15.98	0.81	203.20
Last 5	12:32:23	15308.70	24.16	4.90	58.95	7.05	15.98	0.81	203.34
Last 5	12:37:25	15610.70	23.97	4.90	58.93	6.65	15.98	0.71	202.81
Last 5	12:42:25	15910.70	23.78	4.92	59.09	7.37	15.98	0.76	201.60
Variance 0			-0.09	0.00	0.00			-0.00	0.14
Variance 1			-0.19	0.00	-0.02			-0.10	-0.53
Variance 2			-0.18	0.02	0.15			0.04	-1.22

Notes

Purge rate lowered to 0.1L/min at 832. Parameters stable except for turbidity at 842. Well purged for 4 hours. Sample taken at 1250

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 15:38:02

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name McIntosh LF 3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Pegasus Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 20 ft

Pump placement from TOC 14 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 13.19 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.4292684 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 63.7 in
Total Volume Pumped 28.25 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		+/- 10%	+/- 100	
Last 5	15:05:00	120	10.74	24.09	5.32	76.59	20.60	15.64	0.68	-60.57
Last 5	15:10:00	123	10.75	21.99	5.25	74.43	32.30	15.80	0.43	-42.96
Last 5	15:15:00	126	10.75	21.13	5.57	98.92	59.20	16.26	0.37	-66.79
Last 5	15:25:00	132	10.75	21.24	5.51	78.01	183.00	17.29	2.62	-53.41
Last 5	15:30:00	135	10.74	20.39	5.46	80.05	175.00	18.56	2.62	-56.70
Variance 0			-0.86	0.32	24.49				-0.05	-23.83
Variance 1			0.11	-0.06	-20.91				2.25	13.38
Variance 2			-0.85	-0.05	2.04				-0.01	-3.30

Notes

Already pumped 3 well volumes.

At 1254 all parameters stable except for turbidity. Tubing lowered to 15.5 due to drawdown. 1459 raised purge rate to 0.35L/min to purge well dry per instructions from Brad Filipovich. Purge rate increased to 0.5L/min at 1509. Had issues with flow cell clogging at 1515. Issue resolved at 1525. Finished purging at 1530. No sample taken. Sample collected on 8/31/16 at 13:55 after recharge.

Product Name: Low-Flow System

Date: 2016-08-30 11:05:05

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name McIntosh LF 3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Pegasus Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 20 ft

Pump placement from TOC 13.56 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 11.77 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4292684 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 22.98 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			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	10:41:13	3599.94	22.51	5.35	65.30	7.75	13.74	0.85	-73.58
Last 5	10:46:12	3899.85	22.35	5.29	79.35	5.92	13.76	0.98	-50.43
Last 5	10:51:12	4199.85	22.47	5.35	75.64	11.00	13.80	0.74	-76.60
Last 5	10:56:12	4499.85	22.52	5.35	69.48	10.90	13.85	0.84	-79.62
Last 5	11:01:12	4799.85	22.59	5.37	76.11	12.10	13.90	0.89	-79.86
Variance 0			0.12	0.07	-3.71			-0.23	-26.17
Variance 1			0.06	-0.00	-6.15			0.10	-3.02
Variance 2			0.07	0.01	6.62			0.04	-0.24

Notes

Pumping 3 well volumes since depth to water is 3ft below top of screen
3 well volumes. Stopped work. Purge rate decreased to 0.15 L/min after 2 well volumes.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 09:50:58

Project Information:

Operator Name Prime
Company Name ERM
Project Name McIntosh LF#3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Peristaltic Alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 30 ft

Pump placement from TOC 24.16 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 10 ft
Depth to Water 12.06 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2518951 L
Calculated Sample Rate 300 sec
Stabilization Drawdown ~~13.8 in~~ *70 in*
Total Volume Pumped ~~4 L~~ *MP 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	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	09:26:43	1199.98	23.15	4.81	41.04	0.58	17.40	0.38	69.98
Last 5	09:31:43	1499.98	23.20	4.79	41.14	0.50	17.55	0.41	71.45
Last 5	09:36:43	1799.98	23.38	4.79	41.30	0.59	17.70	0.50	73.93
Last 5	09:41:43	2099.98	23.52	4.79	41.24	0.66	17.80	0.54	74.48
Last 5	09:46:43	2399.98	23.63	4.79	41.24	0.76	17.90	0.56	75.80
Variance 0			0.18	-0.00	0.16			0.08	2.48
Variance 1			0.14	0.00	-0.06			0.05	0.54
Variance 2			0.11	0.00	0.00			0.01	1.32

Notes

Sample GWA-4 taken at 09:50.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 12:04:55

Project Information:

Operator Name Prime
Company Name ERM
Project Name McIntosh LF #3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Peristaltic Alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 28 ft

Pump placement from TOC 23.44 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 11.07 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2424355 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16.92 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	11:38:41	1200.02	23.88	4.58	92.29	3.00	12.08	0.25	119.06
Last 5	11:43:41	1500.02	23.39	4.58	90.96	2.44	12.27	0.18	117.28
Last 5	11:48:41	1800.02	23.29	4.56	92.60	2.25	12.35	0.18	112.19
Last 5	11:53:41	2100.02	23.29	4.55	93.08	2.05	12.42	0.17	107.61
Last 5	11:58:41	2400.02	23.15	4.53	94.37	1.73	12.48	0.17	103.65
Variance 0			-0.10	-0.02	1.64			-0.01	-5.09
Variance 1			0.00	-0.01	0.47			-0.01	-4.58
Variance 2			-0.14	-0.02	1.30			0.00	-3.96

Notes

Sample GWA-5 taken at 12:00. Flow rate constant at 100ml/min.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-30 15:27:10

Project Information:

Operator Name Prime
Company Name ERM
Project Name McIntosh LF #3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Peristaltic Alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 33 ft

Pump placement from TOC 27.85 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.85 ft
Screen Length 10 ft
Depth to Water 15.38 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2660846 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.08 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			+/- 1	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	14:58:01	11099.89	26.35	5.22	49.76	6.47	15.47	1.31	45.46
Last 5	15:03:01	11399.89	25.78	5.22	49.74	5.39	15.47	1.38	46.23
Last 5	15:08:01	11699.89	25.62	5.22	50.09	5.11	15.47	1.42	46.12
Last 5	15:13:01	11999.89	25.86	5.21	50.15	4.88	15.47	1.33	46.06
Last 5	15:18:01	12299.89	25.84	5.22	50.06	5.65	15.47	1.38	46.09
Variance 0			-0.16	-0.01	0.35			0.04	-0.11
Variance 1			0.25	-0.00	0.06			-0.09	-0.06
Variance 2			-0.03	0.00	-0.09			0.05	0.03

Notes

Sampled at 15:30 as per instructions from Brad Filipovich. Turbidity was 5.65 at finish of smartroll.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 16:14:16

Project Information:

Operator Name Prime
Company Name ERM
Project Name McIntosh LF#3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Peristaltic Alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 32 ft

Pump placement from TOC 27.53 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.53 ft
Screen Length 10 ft
Depth to Water 16.41 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2613548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.08 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	15:50:28	300.02	22.91	5.07	38.40	0.99	16.50	2.21	89.30
Last 5	15:55:28	600.02	22.02	5.05	38.93	0.63	16.50	2.27	86.51
Last 5	16:00:28	900.02	21.95	5.05	38.92	0.71	16.50	2.24	84.56
Last 5	16:05:28	1200.02	21.92	5.03	39.48	0.43	16.50	2.25	83.22
Last 5	16:10:28	1500.02	21.78	5.02	39.84	0.52	16.50	2.33	82.48
Variance 0			-0.07	0.00	-0.01			-0.03	-1.95
Variance 1			-0.03	-0.02	0.56			0.02	-1.34
Variance 2			-0.14	-0.01	0.35			0.08	-0.74

Notes

Purge rate 200 ml/min. Samples taken at 16:15.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 14:48:30

Project Information:

Operator Name Prime
Company Name ERM
Project Name McIntosh LF#3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Peristaltic Alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 37 ft

Pump placement from TOC 32.34 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.34 ft
Screen Length 10 ft
Depth to Water 15.52 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.285004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 14.5 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%	+/- 10		+/- 0.3	+/- 10
Last 5	14:19:57	3899.93	23.97	5.50	67.68	0.49	15.55	1.08	66.87
Last 5	14:24:57	4199.93	24.06	5.49	66.51	0.54	15.55	1.10	66.02
Last 5	14:29:57	4499.93	24.01	5.48	66.13	0.34	15.56	1.12	65.44
Last 5	14:34:57	4799.93	24.52	5.48	65.37	0.55	15.56	1.09	64.46
Last 5	14:39:57	5099.93	24.66	5.49	65.90	0.49	15.56	1.12	64.00
Variance 0			-0.05	-0.01	-0.38			0.02	-0.58
Variance 1			0.52	0.00	-0.76			-0.03	-0.98
Variance 2			0.14	0.01	0.53			0.03	-0.46

Notes

Increased purge rate from 100 ml/min to 200 ml/min at second reading. Took sample GWC-2 at 14:55.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 10:07:31

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name McIntosh LF 3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Pegasus Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.69 ft
Screen Length 10 ft
Depth to Water 19.06 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5185369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown ~~0.17 in~~ 1.68 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			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	09:49:58	300.15	23.79	5.17	64.83	1.08	19.19	1.55	142.84
Last 5	09:54:58	600.02	23.50	5.18	65.45	0.69	19.19	1.50	150.10
Last 5	09:59:58	900.02	23.62	5.18	65.30	1.05	19.20	1.48	150.65
Last 5	10:04:58	1200.02	23.88	5.17	64.39	0.62	19.20	1.43	149.28
Last 5									
Variance 0			-0.30	0.00	0.62			-0.05	7.27
Variance 1			0.12	0.01	-0.15			-0.02	0.55
Variance 2			0.27	-0.01	-0.91			-0.05	-1.37

Notes

Sample taken at 1015.

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-31 15:34:48

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name McIntosh LF 3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Pegasus Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.96 ft
Screen Length 10 ft
Depth to Water 17.16 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5185369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown ~~0.2 in~~ 9.84 in
Total Volume Pumped ~~5 L~~ 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		+/- 10%	+/- 100
Last 5	15:09:52	300.10	24.68	4.92	85.95	2.09	17.81	0.30	192.39
Last 5	15:14:52	600.03	24.21	5.03	87.66	2.54	17.90	0.20	170.66
Last 5	15:19:53	900.59	23.70	4.96	87.28	1.26	17.99	0.18	185.89
Last 5	15:24:53	1200.59	23.87	4.93	87.16	0.53	17.98	0.18	194.04
Last 5	15:29:53	1500.59	23.84	4.89	86.28	0.65	19.98 17.98	0.18	205.35
Variance 0			-0.52	-0.07	-0.38		17.98	-0.02	15.23
Variance 1			0.18	-0.03	-0.11			0.01	8.15
Variance 2			-0.03	-0.04	-0.88			-0.00	11.32

Notes

Sample at 1540.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 12:33:44

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name McIntosh LF 3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Pegasus Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 25.5 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.56 ft
Screen Length 10 ft
Depth to Water 16.93 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.487293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown ~~0.36 in~~ 24.24 in
Total Volume Pumped ~~9 L~~ 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			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	12:11:41	3300.61	25.68	7.21	9092.23	0.38	18.95	1.40	130.73
Last 5	12:16:42	3601.61	25.20	7.21	9072.54	0.40	18.95	0.97	126.63
Last 5	12:21:42	3901.61	25.32	7.21	9158.34	0.35	18.95	1.23	123.49
Last 5	12:26:42	4201.61	26.12	7.21	9228.89	0.62	18.95	1.05	122.97
Last 5	12:31:42	4501.61	26.44	7.21	9262.11	0.48	18.95	1.07	122.61
Variance 0			0.12	0.00	85.79			0.26	-3.14
Variance 1			0.81	0.00	70.56			-0.18	-0.52
Variance 2			0.31	0.00	33.21			0.02	-0.36

Notes

Purge rate decreased to 0.1L/min at 1135 due to drawdown. All parameters stable, but conductivity is very high. Sample at 1245 pending bump

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-01 10:46:36

Project Information:

Operator Name Prine
Company Name ERM
Project Name McIntosh LF#3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Peristaltic Alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 32 ft

Pump placement from TOC 27.64 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.64 ft
Screen Length 10 ft
Depth to Water 18.63 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2613548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 146.64 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	10:20:10	4799.98	23.70	4.99	44.04	3.97	29.39	0.43	74.29
Last 5	10:25:10	5099.98	23.83	5.02	44.53	2.52	29.84	0.85	74.25
Last 5	10:30:10	5399.98	23.84	4.99	44.68	2.99	30.06	0.72	72.50
Last 5	10:35:10	5699.98	23.92	5.00	44.73	2.82	30.28	0.75	71.72
Last 5	10:40:10	6000.01	23.89	5.00	44.98	2.04	30.58	0.70	71.03
Variance 0			0.01	-0.03	0.15			-0.13	-1.74
Variance 1			0.08	0.00	0.05			0.03	-0.78
Variance 2			-0.03	0.00	0.25			-0.05	-0.69

Notes

Stopped purging to purge dry. Not recharging sufficiently.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-18 13:00:39

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 48.48 ft

Pump placement from TOC 38.48 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.48 ft
Screen Length 10 ft
Depth to Water 13.84 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3063867 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:40:03	300.03	20.36	5.48	76.51	3.85	14.18	0.36	99.60
Last 5	12:45:03	600.03	20.27	5.43	75.19	4.59	14.21	0.27	90.04
Last 5	12:50:03	900.03	20.25	5.37	76.46	4.45	14.22	0.23	82.71
Last 5	12:55:03	1200.03	20.32	5.37	76.68	4.59	14.22	0.22	76.46
Last 5									
Variance 0			-0.09	-0.05	-1.32			-0.09	-9.56
Variance 1			-0.01	-0.05	1.27			-0.03	-7.33
Variance 2			0.06	-0.00	0.22			-0.02	-6.25

Notes

Weather: 74F mostly cloudy. Purge time: 1235/1255.

Grab Samples

GEA-2A
Sample Time: 1300

Product Name: Low-Flow System

Date: 2017-01-19 13:12:30

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 38.88 ft

Pump placement from TOC 28.88 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 8.96 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2635379 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 62.04 in
Total Volume Pumped 22.5 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	12:46:32	9299.90	20.31	4.90	58.51	5.83	14.13	0.93	61.72
Last 5	12:51:32	9599.91	20.35	4.85	58.81	5.29	14.13	0.70	61.32
Last 5	12:56:32	9899.90	20.39	4.86	58.37	4.70	14.13	0.80	61.15
Last 5	13:01:33	10200.90	20.53	4.85	58.52	4.85	14.13	0.85	60.89
Last 5	13:06:33	10500.91	20.50	4.86	58.32	4.94	14.13	0.79	60.69
Variance 0			0.04	0.01	-0.44			0.10	-0.17
Variance 1			0.14	-0.01	0.15			0.05	-0.26
Variance 2			-0.03	0.01	-0.21			-0.06	-0.20

Notes

Weather: 65F Partly Cloudy. Purge time: 1010/1305

Grab Samples

GWA-3A
Sample Time: 1310

Product Name: Low-Flow System

Date: 2017-01-23 14:03:32

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 23 ft

Pump placement from TOC 13 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 3.29 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3426587 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.32 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	13:41:26	1200.02	17.39	5.49	53.99	6.42	3.86	4.67	145.62
Last 5	13:46:26	1500.02	17.38	5.46	54.49	5.98	3.89	4.39	143.92
Last 5	13:51:26	1800.02	17.38	5.47	54.57	4.74	3.90	4.39	142.65
Last 5	13:56:26	2100.03	17.32	5.47	54.52	4.55	3.90	4.29	141.55
Last 5	14:01:26	2400.02	17.32	5.46	54.64	4.17	3.90	4.25	140.80
Variance 0			-0.00	0.01	0.08			-0.01	-1.27
Variance 1			-0.06	-0.00	-0.04			-0.09	-1.10
Variance 2			-0.00	-0.00	0.12			-0.04	-0.75

Notes

Begin purging at 1321. Finish at 1401. Sample at 1405 at 0.1L/min. Weather is cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-19 10:47:09

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 10 ft
Depth to Water 8.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3439027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 53.28 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			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:25:26	300.13	18.70	5.06	39.75	2.03	9.66	3.67	243.67
Last 5	10:30:26	600.02	18.53	4.70	37.07	1.73	10.71	3.64	285.08
Last 5	10:35:26	900.02	18.57	4.70	36.46	1.70	11.98	3.62	297.67
Last 5	10:40:26	1200.02	18.50	4.71	36.63	1.97	12.79	3.63	300.25
Last 5	10:45:26	1500.01	18.53	4.72	36.47	1.90	12.83	3.62	300.10
Variance 0			0.04	-0.00	-0.60			-0.02	12.60
Variance 1			-0.06	0.01	0.17			0.01	2.58
Variance 2			0.02	0.01	-0.17			-0.02	-0.15

Notes

Parameters stable

Grab Samples

GWA-4
Sampling at 10:48

Product Name: Low-Flow System

Date: 2017-01-19 12:05:49

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 7.09 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3439027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.72 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			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:48:05	300.03	20.10	4.74	45.48	3.70	8.05	1.69	298.98
Last 5	11:53:05	600.00	19.52	4.78	46.01	3.73	8.70	1.64	293.80
Last 5	11:58:05	900.00	19.51	4.79	46.04	3.41	9.00	1.58	290.06
Last 5	12:03:05	1200.00	19.54	4.79	45.93	3.22	9.65	1.47	289.81
Last 5									
Variance 0			-0.59	0.04	0.53			-0.05	-5.18
Variance 1			-0.01	0.02	0.03			-0.06	-3.74
Variance 2			0.04	-0.01	-0.10			-0.11	-0.25

Notes

May need to decrease purge rate to .100L/min
Parameters stable

Grab Samples

GWA-5
Sampling at 1207

Product Name: Low-Flow System

Date: 2017-01-19 16:21:12

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449471
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.84 ft
Screen Length 10 ft
Depth to Water 12.33 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.357293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.4 in
Total Volume Pumped 23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:00:26	5701.95	20.22	5.27	37.30	--	--	0.84	235.65
Last 5	16:05:26	6001.95	20.28	5.26	37.41	11.20	12.52	0.84	236.29
Last 5	16:10:26	6301.95	20.22	5.27	37.33	4.42	12.52	0.82	236.03
Last 5	16:15:26	6601.95	20.13	5.28	37.31	4.71	12.53	0.84	235.54
Last 5	16:20:26	6901.94	20.11	5.28	37.34	4.25	12.53	0.83	235.49
Variance 0			-0.07	0.00	-0.08			-0.02	-0.26
Variance 1			-0.09	0.01	-0.02			0.01	-0.49
Variance 2			-0.02	0.01	0.03			-0.01	-0.04

Notes

Parameters stable.

Grab Samples

GWA-7
Sampling at 1623

Product Name: Low-Flow System

Date: 2017-01-23 15:58:42

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 36 ft

Pump placement from TOC 27.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.53 ft
Screen Length 10 ft
Depth to Water 11.91 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4006832 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		+/- 10%	+/- 10
Last 5	15:40:43	300.16	18.36	5.30	47.46	2.43	12.01	2.61	86.53
Last 5	15:45:43	600.03	18.90	5.27	45.51	2.48	12.01	2.45	77.79
Last 5	15:50:43	900.03	18.92	5.24	44.92	1.74	12.01	2.42	73.82
Last 5	15:55:43	1200.03	18.97	5.22	44.48	2.19	12.01	2.40	71.43
Last 5									
Variance 0			0.54	-0.03	-1.95			-0.16	-8.75
Variance 1			0.02	-0.03	-0.60			-0.03	-3.96
Variance 2			0.04	-0.02	-0.44			-0.02	-2.39

Notes

Started purging at 1535. Finish at 1555. Sample at 1600 at 0.2L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-24 10:59:19

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.34 ft
Screen Length 10 ft
Depth to Water 10.72 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4185369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.96 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:36:48	1200.06	19.15	5.29	57.01	1.38	10.80	2.44	61.79
Last 5	10:41:47	1498.99	19.08	5.25	55.13	1.47	10.80	2.37	61.48
Last 5	10:46:47	1798.98	19.12	5.23	54.05	1.14	10.80	2.19	60.68
Last 5	10:51:47	2098.98	19.32	5.22	52.74	1.03	10.80	2.10	59.53
Last 5	10:56:47	2398.98	19.47	5.25	53.95	1.12	10.80	2.09	60.22
Variance 0			0.04	-0.02	-1.08			-0.18	-0.80
Variance 1			0.20	-0.01	-1.31			-0.09	-1.16
Variance 2			0.15	0.02	1.22			-0.01	0.70

Notes

Began purging at 1016. Well stable at 1056. Sample at 1100. Weather is sunny. Extra Radium sample taken. Weather sunny.

Grab Samples

Location River Georgia Date 2-2-12Project / Client Plant McIntosh WQ / Georgia Power CompanyTask: 1 F3 Groundwater SamplingPM/FTL: Greg Cochran Team: J. Payne, M. ThomasWeather: 52°F Sunny; calm

0630 Arrive at ERM Shed / Plant McIntosh / Begin setting up

0649 H/S meeting

0900 Report ERM Shed

0925 Pick truck and combine on trail to ~~GW-6~~ ^{GW-3}

0930 Arrive at GW-3 Begin setting up

0948 Total Depth 36
Depth to Water - 14.52
21.48

Well Volume 2.52 gal or 13.333L

Intake Depth 31-21

Rose Metal Low flow / Allow Peristaltic

0950 Begin Pump. Start pump @ 200ml/min

Location River Georgia Date 2-2-12Project / Client Plant McIntosh WQ / Georgia Power Company

	pH	SpCond	ORP	DO	Temp	Turb	DO
0955	5.26	76.90	123.20	1.72	18.22	2.39	11.69
1000	5.22	65.20	110.20	1.36	19.19	1.24	14.7
1005	5.21	64.20	108.10	1.22	19.06	1.19	14.71
1010	5.21	64.30	101.10	1.33	19.04	0.44	14.31
1015	5.22	64.20	100.90	1.31	18.92	1.20	14.31
	All Parameters Stable. Pump completed changing gloves						

1020 Begin sampling

1055 Stop pump sampling complete GW-3 sampled
65°F Sunny and calm pick-up 10 36.67

1039 Report GW-3

1053 Load equipment onto truck

1103 Lock gate. Report to GW-6

1112 Pick truck and combine on trail

1132 Arrive at GW-6, Begin setting up

1136 Start pump. Begin Allis, Radon bottle

Product Name: Low-Flow System

Date: 2017-01-25 14:46:01

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.96 ft
Screen Length 10 ft
Depth to Water 12.3 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4185369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 10.08 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:23:04	2400.03	22.00	4.75	75.51	1.35	13.14	1.59	97.49
Last 5	14:28:04	2700.03	21.96	4.74	74.75	1.27	13.14	1.32	92.65
Last 5	14:33:04	3000.02	22.02	4.74	74.51	0.92	13.14	1.19	88.41
Last 5	14:38:04	3300.03	21.96	4.73	74.31	1.01	13.14	1.07	85.92
Last 5	14:43:04	3599.95	21.95	4.73	74.04	0.94	13.14	1.17	84.57
Variance 0			0.06	-0.01	-0.24			-0.12	-4.24
Variance 1			-0.06	-0.01	-0.20			-0.12	-2.49
Variance 2			-0.01	0.00	-0.27			0.10	-1.35

Notes

Begin purging at 1343. Finish purging at 1443. Sample at 1450 at 0.2L/min. Weather is sunny.

Grab Samples

GWC-4A
1450

DUP-1
1450

Product Name: Low-Flow System

Date: 2017-01-25 16:15:10

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 23 ft

Pump placement from TOC 10.5 ft

Well Information:

Well ID GWC-4B
Well diameter 2 in
Well Total Depth 14.74 ft
Screen Length 10 ft
Depth to Water 8.4 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3426587 L
Calculated Sample Rate 240 sec
Stabilization Drawdown 7.2 in
Total Volume Pumped 15.2 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:56:39	1442.03	20.22	4.48	165.37	8.02	9.00	4.25	79.67
Last 5	16:00:39	1682.02	20.68	4.49	167.26	5.11	8.91	3.79	80.91
Last 5	16:04:39	1922.03	20.81	4.49	171.57	4.20	8.90	3.49	75.12
Last 5	16:08:39	2162.03	20.75	4.49	168.78	4.65	8.90	3.33	75.00
Last 5	16:12:39	2402.03	20.74	4.50	167.08	4.47	8.90	3.22	75.38
Variance 0			0.13	-0.00	4.31			-0.30	-5.79
Variance 1			-0.06	0.00	-2.79			-0.16	-0.12
Variance 2			-0.01	0.01	-1.70			-0.12	0.39

Notes

Purged 3 well volumes since depth to water was below top of screen. Well volumes purged beginning at 1532 at 0.5L/min. Purge rate lowered to 0.2L/min after 3rd volume. Well stable at 1612. Sample at 1620 at 0.2L/min. Weather sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-24 12:31:23

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 31.5 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 36.69 ft
Screen Length 10 ft
Depth to Water 10.4 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.4185369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.6 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:05:26	300.09	20.22	8.38	7826.82	0.79	11.68	0.66	51.70
Last 5	12:10:26	600.03	20.32	8.34	7736.02	0.61	12.45	0.41	42.30
Last 5	12:15:26	900.03	20.39	8.33	7691.41	0.74	12.72	0.26	37.46
Last 5	12:20:26	1200.02	20.48	8.32	7699.65	0.60	12.90	0.25	35.62
Last 5	12:25:26	1500.03	20.48	8.32	7669.88	0.76	12.95	0.26	33.68
Variance 0			0.08	-0.01	-44.61			-0.16	-4.84
Variance 1			0.08	-0.01	8.24			-0.00	-1.84
Variance 2			0.01	-0.00	-29.76			0.01	-1.94

Notes

Began purging at 1200 at 0.2 L/min. Lowered purge rate to 0.1L/min at 1215 due to drawdown. Specific conductivity is high. Bump test to be performed to determine if high readings are accurate. Well stable at 1225. Sample at 1240 at 0.1 L/min. Weather sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-28 10:08:18

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
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 41 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.04 ft
Screen Length 10 ft
Depth to Water 7.81 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5230004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.08 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:45:16	900.02	18.89	5.31	54.50	2.12	7.90	0.97	32.32
Last 5	09:50:16	1200.02	18.79	5.32	55.98	1.87	7.90	0.85	30.23
Last 5	09:55:16	1500.02	18.88	5.33	57.03	2.50	7.90	0.79	28.15
Last 5	10:00:17	1801.02	18.88	5.33	57.81	2.43	7.90	0.74	26.48
Last 5	10:05:17	2101.02	18.86	5.33	57.55	2.32	7.90	0.72	25.27
Variance 0			0.09	0.01	1.04			-0.06	-2.08
Variance 1			-0.00	0.01	0.79			-0.05	-1.67
Variance 2			-0.02	-0.01	-0.26			-0.02	-1.21

Notes

Begin purging at 0930. Well stable at 1005. Sample at 1010. Sample rate 0.1L/min. Weather is cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2017-02-28 12:19:03

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
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 46 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.2 ft
Screen Length 10 ft
Depth to Water 13.03 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5453175 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.16 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:56:36	900.02	21.82	5.42	68.12	0.44	13.21	0.62	32.71
Last 5	12:01:36	1200.02	21.67	5.45	68.29	0.32	13.21	0.51	30.37
Last 5	12:06:36	1500.02	21.64	5.43	69.27	0.61	13.21	0.45	30.43
Last 5	12:11:36	1800.02	21.56	5.44	69.05	1.51	13.21	0.43	29.75
Last 5	12:16:36	2100.02	21.43	5.44	69.73	0.77	13.21	0.40	29.24
Variance 0			-0.03	-0.02	0.99			-0.06	0.06
Variance 1			-0.08	0.01	-0.23			-0.03	-0.67
Variance 2			-0.12	-0.00	0.68			-0.02	-0.51

Notes

Began purging at 1141. Well stable at 1216. Sample at 1221. Sample rate 0.1L/min. Weather sunny.

Grab Samples

GWA-2A
1221

Product Name: Low-Flow System

Date: 2017-07-17 16:42:20

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 38 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.04 ft
Screen Length 10 ft
Depth to Water 9.1 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2697338 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	16:20:03	600.03	22.18	5.76	52.98	0.86	9.28	1.14	178.74
Last 5	16:25:03	899.82	21.91	5.31	51.62	1.01	9.28	1.02	182.21
Last 5	16:30:03	1199.81	21.73	5.17	50.52	1.14	9.28	0.90	183.93
Last 5	16:35:03	1499.82	21.73	5.11	50.21	1.04	9.28	0.84	184.12
Last 5	16:40:03	1799.81	21.82	5.09	49.66	1.17	9.28	0.80	183.28
Variance 0			-0.18	-0.15	-1.10			-0.12	1.72
Variance 1			-0.00	-0.06	-0.31			-0.05	0.19
Variance 2			0.09	-0.02	-0.55			-0.04	-0.84

Notes

Begin purging at 1610. Stable at 1640. Sample at 1645. Sample rate 0.2L/min. Weather is cloudy.

Grab Samples

GWA-1A
1645

Product Name: Low-Flow System

Date: 2017-07-18 10:24:12

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 46 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.2 ft
Screen Length 10 ft
Depth to Water 14.12 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3075726 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.68 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		+/- 0.2	+/- 10
Last 5	10:01:55	600.03	20.97	6.20	72.75	0.90	14.51	0.31	152.74
Last 5	10:06:55	900.03	20.94	5.67	74.33	0.85	14.51	0.31	150.16
Last 5	10:11:55	1200.02	20.93	5.57	75.17	0.82	14.51	0.29	148.39
Last 5	10:16:55	1500.03	20.95	5.55	75.76	0.59	14.51	0.27	147.56
Last 5	10:21:55	1800.04	21.02	5.54	76.16	0.65	14.51	0.25	148.05
Variance 0			-0.01	-0.09	0.84			-0.01	-1.77
Variance 1			0.02	-0.03	0.59			-0.03	-0.82
Variance 2			0.06	-0.01	0.41			-0.02	0.49

Notes

Begin purging at 0951. Well stable at 1021. Sample at 1030. DUP-1 taken. Weather is cloudy.

Grab Samples

GWA-2A
1030
DUP-1
1030

Product Name: Low-Flow System

Date: 2017-07-18 12:07:41

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 38 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 9.27 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2697338 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.48 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:38:09	300.09	21.86	5.06	55.70	2.44	10.25	0.91	224.12
Last 5	11:48:09	900.03	21.45	5.03	56.24	2.08	11.25	0.83	201.36
Last 5	11:53:09	1200.03	21.55	5.03	55.97	1.03	11.55	0.81	195.73
Last 5	11:58:09	1500.03	21.87	5.02	56.11	1.12	11.75	0.79	195.53
Last 5	12:03:09	1800.03	21.79	5.02	56.35	1.24	11.81	0.77	189.03
Variance 0			0.10	-0.01	-0.28			-0.01	-5.63
Variance 1			0.32	-0.00	0.14			-0.02	-0.20
Variance 2			-0.08	-0.00	0.24			-0.02	-6.50

Notes

Begin purging at 1133. Initial purge rate 0.2L/min. Lower purge rate to 0.15L/min at 1143. Lower purge rate to 0.1L/min at 1153. Well stable at 1203. Sample at 1215. Weather is cloudy.

Grab Samples

GWA-3A
1215

Product Name: Low-Flow System

Date: 2017-07-18 13:33:26

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 22 ft

Pump placement from TOC 13.5 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 6.5 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1940564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.48 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:10:40	900.03	23.39	5.34	48.56	4.34	7.04	1.92	185.98
Last 5	13:15:40	1200.03	23.39	5.34	48.68	4.19	7.04	1.95	184.27
Last 5	13:20:40	1500.03	23.61	5.33	48.47	4.14	7.04	2.03	185.00
Last 5	13:25:40	1800.06	23.57	5.32	48.57	4.33	7.04	2.14	184.47
Last 5	13:30:40	2100.05	23.52	5.32	48.49	4.29	7.04	2.15	183.83
Variance 0			0.22	-0.01	-0.21			0.08	0.73
Variance 1			-0.05	-0.01	0.11			0.11	-0.53
Variance 2			-0.04	0.00	-0.08			0.01	-0.63

Notes

Begin purging at 1255. Well stable at 1330. Sample at 1335. Sample rate 0.1L/min. Weather is cloudy.

Grab Samples

GWA-3B
1335

Product Name: Low-Flow System

Date: 2017-07-18 15:36:33

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 32 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 10 ft
Depth to Water 8.82 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2413548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 97.08 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:12:50	3299.93	23.57	4.95	41.56	1.32	16.28	1.31	179.56
Last 5	15:17:50	3599.93	23.66	4.96	40.99	1.56	16.48	1.27	182.81
Last 5	15:22:50	3899.93	23.79	4.96	41.08	1.55	16.65	1.28	179.55
Last 5	15:27:50	4199.93	23.63	4.95	40.85	0.89	16.80	1.23	179.23
Last 5	15:32:50	4499.85	23.69	4.96	40.81	0.96	16.91	1.16	179.22
Variance 0			0.13	-0.00	0.09			0.01	-3.26
Variance 1			-0.16	-0.01	-0.22			-0.05	-0.32
Variance 2			0.07	0.00	-0.04			-0.08	-0.01

Notes

Begin purging at 1417. Initial purge rate 0.25L/min. Lower purge rate to 0.2L/min due to excessive drawdown at 1427. Lower purge rate to 0.15L/min at 1432. Lower purge rate to 0.1L/min at 1442. Well stable at 1532. Sample at 1535. Sample rate 0.1L/min. Weather is sunny.

Grab Samples

GWA-4
1535

Product Name: Low-Flow System

Date: 2017-07-19 10:40:39

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 32 ft

Pump placement from TOC 23 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 7.45 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2413548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 50.88 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:17:16	2100.03	22.09	4.84	72.61	4.83	11.13	0.20	163.19
Last 5	10:22:16	2400.03	22.11	4.84	72.62	4.59	11.26	0.19	163.39
Last 5	10:27:16	2700.03	22.01	4.83	72.64	3.72	11.51	0.19	164.98
Last 5	10:32:16	3000.03	22.08	4.83	72.76	3.52	11.62	0.19	163.07
Last 5	10:37:16	3300.03	22.10	4.83	72.41	3.49	11.69	0.19	162.91
Variance 0			-0.10	-0.00	0.02			-0.01	1.59
Variance 1			0.07	-0.00	0.11			0.01	-1.91
Variance 2			0.03	-0.00	-0.35			-0.00	-0.15

Notes

Begin purging at 0942 at 0.25L/min. Lower purge rate to 0.2L/min at 0957. Lower purge rate to 0.1L/min at 1007. Well stable at 1037. Sample at 1040. Weather is sunny.

Grab Samples

FERB-1
1045
GWA-5
1040

Product Name: Low-Flow System

Date: 2017-07-19 11:59:41

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 36 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.84 ft
Screen Length 10 ft
Depth to Water 12.56 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2602742 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.16 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	+/- 10
Last 5	11:42:37	300.17	22.65	5.44	36.73	5.20	12.74	0.48	180.87
Last 5	11:47:37	600.03	22.02	5.42	37.01	4.93	12.74	0.41	163.93
Last 5	11:52:37	900.03	22.10	5.42	36.92	4.06	12.74	0.39	156.51
Last 5	11:57:37	1200.03	21.94	5.41	36.84	4.18	12.74	0.36	152.12
Last 5									
Variance 0			-0.62	-0.02	0.28			-0.06	-16.94
Variance 1			0.08	-0.00	-0.09			-0.03	-7.42
Variance 2			-0.15	-0.00	-0.07			-0.02	-4.39

Notes

Begin purging at 1137. Stable at 1157. Sample at 1200. Sample rate 0.25L/min. Weather is sunny.

Grab Samples

GWA-7
1200. Extra Ra

Product Name: Low-Flow System

Date: 2017-07-19 14:07:22

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 36 ft

Pump placement from TOC 27.5 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.53 ft
Screen Length 10 ft
Depth to Water 13.08 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2602742 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.68 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:49:50	300.16	22.48	5.24	35.06	1.17	13.22	2.00	234.90
Last 5	13:54:50	600.03	21.98	5.24	35.22	1.06	13.22	1.97	212.47
Last 5	13:59:50	900.03	21.73	5.24	35.36	0.36	13.22	1.96	204.54
Last 5	14:04:50	1200.03	21.76	5.23	35.65	0.51	13.22	1.96	196.84
Last 5									
Variance 0			-0.50	0.00	0.16			-0.03	-22.43
Variance 1			-0.24	-0.00	0.14			-0.01	-7.93
Variance 2			0.03	-0.01	0.30			-0.00	-7.71

Notes

Begin purging at 1344. Well stable at 1404. Sample at 1410. Weather is sunny.

Grab Samples

GWC-1
1410

Product Name: Low-Flow System

Date: 2017-07-19 15:26:25

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

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-2
Well diameter 2 in
Well Total Depth 37.34 ft
Screen Length 10 ft
Depth to Water 11.98 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2791936 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 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%	+/- 5		+/- 0.2	+/- 10
Last 5	15:04:02	300.09	24.92	5.68	67.32	0.93	12.07	1.55	217.60
Last 5	15:09:02	600.03	24.33	5.63	64.15	0.98	12.08	1.58	202.28
Last 5	15:14:02	900.04	24.24	5.58	61.11	0.86	12.08	1.59	197.46
Last 5	15:19:02	1200.03	24.20	5.57	59.48	0.40	12.08	1.59	200.20
Last 5	15:24:02	1499.91	24.06	5.54	58.66	0.63	12.08	1.56	193.00
Variance 0			-0.09	-0.05	-3.04			0.01	-4.82
Variance 1			-0.04	-0.02	-1.64			-0.00	2.74
Variance 2			-0.14	-0.03	-0.82			-0.03	-7.20

Notes

Begin purging at 1459. Well stable at 1524. Sample at 1530. Sample rate 0.25L/min. Weather is sunny.

Grab Samples

GWC-2
1530

Product Name: Low-Flow System

Date: 2017-07-20 10:13:29

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 31 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.69 ft
Screen Length 10 ft
Depth to Water 15.95 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2730004 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	09:51:24	300.08	20.94	5.25	58.65	0.84	16.19	1.23	144.60
Last 5	09:56:24	600.03	20.44	5.16	58.55	0.86	16.19	1.11	124.89
Last 5	10:01:24	900.03	20.35	5.15	58.24	0.70	16.20	1.15	117.47
Last 5	10:06:24	1200.03	20.35	5.14	57.09	0.89	16.20	1.16	113.66
Last 5	10:11:24	1500.03	20.30	5.12	57.13	0.93	16.20	1.04	111.99
Variance 0			-0.09	-0.00	-0.31			0.04	-7.43
Variance 1			-0.00	-0.01	-1.16			0.01	-3.81
Variance 2			-0.05	-0.02	0.04			-0.12	-1.66

Notes

Purge started at 0946. Purge rate of 250 ml/min. Weather - clear/sunny 78F.
Parameters stable at 1011. Well sampled at 1020. Sample rate of 250 ml/min.

Grab Samples

GWC-3
1020

Product Name: Low-Flow System

Date: 2017-07-20 10:07:14

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

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-4A
Well diameter 2 in
Well Total Depth 36.96 ft
Screen Length 10 ft
Depth to Water 13.71 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2791936 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.92 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:43:49	1499.94	22.54	4.91	65.90	9.88	14.37	0.44	196.32
Last 5	09:48:49	1799.93	22.54	4.96	64.74	6.26	14.37	0.33	181.92
Last 5	09:53:49	2099.94	22.46	4.96	64.07	4.36	14.37	0.28	175.04
Last 5	09:58:49	2399.94	22.47	4.96	63.41	4.51	14.37	0.24	172.53
Last 5	10:03:49	2699.94	22.64	4.96	63.74	3.45	14.37	0.22	170.17
Variance 0			-0.08	0.01	-0.68			-0.05	-6.88
Variance 1			0.01	-0.00	-0.66			-0.05	-2.51
Variance 2			0.16	0.00	0.34			-0.02	-2.36

Notes

Begin purging at 0918. Initial purge rate 0.25L/min. Lower purge rate to 0.15L/min at 0933 due to high turbidity. Well stable at 1003. Sample at 1010. Weather is sunny.

Grab Samples

GWC-4A
1010

Product Name: Low-Flow System

Date: 2017-07-20 11:30:40

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 22 ft

Pump placement from TOC 12 ft

Well Information:

Well ID GWC-4B
Well diameter 2 in
Well Total Depth 14.74 ft
Screen Length 10 ft
Depth to Water 11.3 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.1940564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.8 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:07:46	600.03	22.90	4.67	181.08	0.73	11.65	0.16	106.44
Last 5	11:12:46	900.03	22.59	4.72	160.26	0.63	11.71	0.13	95.20
Last 5	11:17:46	1200.03	22.85	4.76	139.54	0.59	11.70	0.14	86.43
Last 5	11:22:46	1500.03	23.28	4.77	137.57	0.33	11.70	0.12	81.92
Last 5	11:27:46	1799.92	22.98	4.77	134.18	0.41	11.70	0.13	79.94
Variance 0			0.26	0.04	-20.72			0.01	-8.77
Variance 1			0.43	0.01	-1.98			-0.01	-4.51
Variance 2			-0.30	-0.00	-3.39			0.00	-1.98

Notes

Begin purging 3 well volumes at 1057 since depth to water was below top of screen. Purge rate 0.45L/min. Lower purge rate to 0.25L/min after 3rd well volume at 1112. Well stable at 1127. Sample at 1135. Sample rate 0.25L/min. Weather is sunny.

Grab Samples

GWC-4B
1135

Product Name: Low-Flow System

Date: 2017-07-20 11:40:15

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model Hanna HI98703

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-5
Well diameter 2 in
Well Total Depth 30.56 ft
Screen Length 10 ft
Depth to Water 12.39 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 62.28 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:16:08	1199.91	22.40	7.18	3221.62	0.57	16.77	0.16	58.26
Last 5	11:21:08	1499.91	22.66	7.25	3300.54	0.58	17.18	0.15	56.29
Last 5	11:26:08	1799.91	22.42	7.32	3351.74	0.75	17.53	0.14	55.16
Last 5	11:31:08	2099.91	23.16	7.35	3375.48	0.53	17.58	0.16	55.31
Last 5	11:36:08	2399.91	23.27	7.41	3449.24	0.41	17.49	0.17	54.63
Variance 0			-0.25	0.07	51.20			-0.01	-1.13
Variance 1			0.75	0.04	23.75			0.02	0.15
Variance 2			0.11	0.05	73.75			0.01	-0.68

Notes

Purge started at 1056. Purge rate of 250 ml/min. Weather - clear/sunny 81F.

Purge rate slowed to 200 ml/min at 1101. Purge rate slowed to 100 ml/min at 1126. Parameters stable at 1136. Well sampled at 1145. Sample rate of 100 ml/min.

Grab Samples
GWC-5
1145

Product Name: Low-Flow System

Date: 2017-07-19 13:23:44

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC- McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 40 ft

Pump placement from TOC 27 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.64 ft
Screen Length 10 ft
Depth to Water 15.06 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.2791936 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 210.96 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:03:17	300.16	21.45	5.20	40.84	--	--	1.14	204.02
Last 5	13:08:17	600.03	21.04	5.21	40.93	--	--	1.18	189.75
Last 5	13:13:17	900.03	21.20	5.22	41.05	--	--	1.55	191.72
Last 5	13:18:17	1200.03	21.48	5.27	41.84	--	--	1.98	199.64
Last 5									
Variance 0			-0.41	0.00	0.09			0.04	-14.26
Variance 1			0.16	0.01	0.12			0.37	1.96
Variance 2			0.28	0.05	0.79			0.43	7.93

Notes

Begin purging at 1258. Purge 3 well volumes since well has historically had significant drawdown. Well went dry at 1322. Well not sampled.
Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-20 10:54:46

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 .17 in
Tubing Length 45 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.04 ft
Screen Length 10 ft
Depth to Water 7.10 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 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%	+/- 5		+/- 0.2	+/- 100
Last 5	10:25:03	300.08	21.55	6.49	54.14	0.79	7.31	0.79	57.58
Last 5	10:30:03	600.03	20.97	5.40	54.61	1.37	7.34	0.72	60.53
Last 5	10:35:03	900.02	20.88	5.31	55.03	1.59	7.35	0.67	62.32
Last 5	10:40:03	1200.02	20.85	5.30	54.58	2.07	7.36	0.65	63.97
Last 5	10:45:03	1500.03	20.79	5.29	54.83	2.77	7.36	0.64	65.27
Variance 0			-0.09	-0.08	0.41			-0.05	1.79
Variance 1			-0.03	-0.01	-0.45			-0.02	1.65
Variance 2			-0.05	-0.01	0.25			-0.00	1.30

Notes

1020 start purge at 250mL/min; 1045 all parameters stable; 1050 sample at 250mL/min. 81F Partly Cloudy

Grab Samples

GWA-1A
Sampled at 1050

Product Name: Low-Flow System

Date: 2017-09-21 10:31:03

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 .17 in
Tubing Length 40 ft

Pump placement from TOC 27 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.53 ft
Screen Length 10 ft
Depth to Water 10.43 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 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%	+/- 5		+/- 0.2	+/- 100
Last 5	10:05:30	600.03	21.27	5.11	37.08	0.58	10.59	2.01	99.13
Last 5	10:10:30	900.03	21.09	5.10	36.71	0.68	10.59	2.01	106.30
Last 5	10:15:30	1200.03	21.07	5.08	36.38	0.54	10.59	2.01	113.51
Last 5	10:20:30	1500.02	21.01	5.08	36.72	0.66	10.59	2.03	118.88
Last 5	10:25:30	1800.03	21.34	5.34	0.00	0.00	--	7.76	74.64
Variance 0			-0.02	-0.03	-0.33			-0.01	7.21
Variance 1			-0.06	0.00	0.33			0.02	5.37
Variance 2			0.33	0.26	-36.72			5.73	-44.24

Notes

0955 start purge at 250mL/min; 1020 all parameters stable; 1025 sampled at 250mL/min. 75F Sunny *SmarTroll logged once more after water was disconnected from flow cell

Grab Samples

GWC-1
Sampled at 1025
DUP-1
Sampled at 1025

Product Name: Low-Flow System

Date: 2017-09-21 12:04:49

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 .17 in
Tubing Length 42 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.34 ft
Screen Length 10 ft
Depth to Water 9.5 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:30:00	900.00	22.45	5.32	57.41	1.87	9.63	1.51	122.92
Last 5	11:35:00	1200.01	22.32	5.25	54.19	1.33	9.63	1.59	124.87
Last 5	11:45:00	1800.00	22.40	5.19	51.45	1.13	9.63	1.62	131.83
Last 5	11:50:00	2100.00	22.31	5.19	51.32	0.88	9.63	1.61	131.30
Last 5	11:55:00	2400.00	22.21	5.19	51.08	0.82	9.63	1.62	132.26
Variance 0			0.08	-0.07	-2.74			0.04	6.96
Variance 1			-0.09	0.00	-0.13			-0.01	-0.53
Variance 2			-0.11	-0.00	-0.24			0.01	0.97

Notes

1115 start purge at 250mL/min; 1040 SmarTroll did not log readings; 1155 all parameters stable; 1200 sampled at 250mL/min. 85F Sunny

Grab Samples

GWC-2
Sampled at 1200
FB-1
Collected at 1215

Product Name: Low-Flow System

Date: 2017-09-21 13:23:52

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 .17 in
Tubing Length 45 ft

Pump placement from TOC 27 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.64 ft
Screen Length 10 ft
Depth to Water 12.81 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 238 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:40:00	300.03	21.41	5.00	42.27	2.18	16.73	1.68	137.88
Last 5	12:45:00	600.03	21.55	5.01	42.63	3.10	20.80	2.66	134.36
Last 5	12:50:00	900.00	21.95	5.05	43.90	1.34	24.78	3.83	135.82
Last 5	12:55:00	1199.99	21.66	4.99	43.12	3.33	27.82	1.80	135.17
Last 5	13:10:00	2100.00	22.45	4.99	44.97	19.50	31.40	2.04	155.09
Variance 0			0.41	0.04	1.28			1.16	1.46
Variance 1			-0.29	-0.06	-0.78			-2.03	-0.66
Variance 2			0.78	0.00	1.85			0.24	19.93

Notes
1235 start purge at 500mL/min; 1300 & 1305 SmarTroll did not log readings; 1314 well Dry. Will sample recharge

Grab Samples

Product Name: Low-Flow System

Date: 2017-09-21 14:29:21

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 .17 in
Tubing Length 45 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.96 ft
Screen Length 10 ft
Depth to Water 10.98 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 14 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:05:00	300.03	23.62	4.95	60.28	3.51	11.94	0.21	141.58
Last 5	14:10:00	600.03	23.02	4.88	61.34	3.19	12.10	0.15	131.39
Last 5	14:15:00	900.03	22.99	4.83	62.40	2.94	12.14	0.12	127.16
Last 5	14:20:00	1200.02	23.21	4.80	63.17	2.64	12.14	0.11	124.24
Last 5	14:25:00	1500.00	23.23	4.78	63.62	1.44	12.14	0.11	125.24
Variance 0			-0.04	-0.05	1.06			-0.02	-4.23
Variance 1			0.22	-0.04	0.78			-0.01	-2.92
Variance 2			0.02	-0.02	0.44			-0.00	0.99

Notes

1400 start purge at 250mL/min; 1425 all parameters stable; 1430 sampled at 250mL/min. 90F Mostly Cloudy

Grab Samples

GWC-4A
Sampled at 1430

Product Name: Low-Flow System

Date: 2017-09-21 15:46:49

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 .17 in
Tubing Length 19 ft

Pump placement from TOC 9 ft

Well Information:

Well ID GWC-4B
Well diameter 2 in
Well Total Depth 14.74 ft
Screen Length 10 ft
Depth to Water 8.21 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.1748051 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11 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		+/- 0.2	+/- 100
Last 5	15:15:00	1800.03	24.48	4.73	174.34	1.48	8.95	0.09	37.92
Last 5	15:20:00	2100.03	24.53	4.74	161.89	1.44	8.90	0.08	31.90
Last 5	15:25:00	2400.03	24.56	4.77	161.10	0.88	8.87	0.07	27.44
Last 5	15:30:00	2699.98	24.51	4.78	153.76	1.14	8.84	0.07	19.77
Last 5	15:35:00	2999.98	24.38	4.78	158.48	1.21	8.83	0.06	18.93
Variance 0			0.03	0.02	-0.79			-0.01	-4.46
Variance 1			-0.05	0.02	-7.34			-0.00	-7.67
Variance 2			-0.14	-0.00	4.73			-0.00	-0.84

Notes

1445 start purge at 500mL/min; 1505 reduce purge rate to 250mL/min; 1535 3 well volumes purged, all parameters stable; 1540 sampled at 250mL/min. 90F Partly Cloudy

Grab Samples

GWC-4B
Sampled at 1540
2nd Rad
Sampled at 1540

Product Name: Low-Flow System

Date: 2017-09-21 10:37:20

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 34 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 10 ft
Depth to Water 6.59 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2417564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 76 in
Total Volume Pumped 6.5 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	+/- 100
Last 5	10:13:11	1500.03	23.16	4.66	40.16	0.72	11.51	0.79	101.94
Last 5	10:18:11	1800.02	23.21	4.66	40.22	0.71	12.08	0.78	100.69
Last 5	10:23:11	2099.91	23.22	4.66	39.54	0.64	12.61	0.76	99.83
Last 5	10:28:11	2399.91	23.29	4.66	39.94	0.70	12.80	0.74	98.91
Last 5	10:33:11	2699.91	23.34	4.70	39.04	0.67	12.92	0.66	95.58
Variance 0			0.01	0.00	-0.67			-0.02	-0.86
Variance 1			0.08	0.00	0.40			-0.02	-0.91
Variance 2			0.05	0.03	-0.90			-0.08	-3.34

Notes

Purge started at 0948. Purge rate of 200 ml/min.
Purge rate reduced to 150 ml/min at 1003 to minimize drawdown. Well stable excluding water level at 1013 - purge rate reduced to 100 ml/min. Well stable at 1033. Sample Time 1040. Weather - clear /sunny 70 F.

Product Name: Low-Flow System

Date: 2017-09-21 12:32:48

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 34 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 5.38 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2417564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 48 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%	+/- 10		+/- 0.2	+/- 100
Last 5	12:09:02	1800.03	25.33	4.58	74.77	7.77	8.61	0.19	110.51
Last 5	12:14:02	2100.03	25.33	4.57	76.64	5.14	8.93	0.19	114.12
Last 5	12:19:02	2399.90	24.79	4.57	77.34	4.73	9.11	0.18	110.82
Last 5	12:24:02	2699.90	25.14	4.57	78.04	3.82	9.29	0.17	115.19
Last 5	12:29:02	2999.90	24.83	4.57	78.05	3.42	9.40	0.18	108.39
Variance 0			-0.54	-0.00	0.70			-0.00	-3.30
Variance 1			0.35	-0.00	0.70			-0.01	4.37
Variance 2			-0.31	0.00	0.01			0.01	-6.80

Notes

Purge started at 1139. Purge rate of 200 ml/min.

Purge rate reduced to 100 ml/min at 1159 due to elevated turbidity. Parameters stable at 1229. Well sampled at 1240. Weather - sunny 83 F.

Grab Samples

GWA-5
1240

Product Name: Low-Flow System

Date: 2017-09-21 14:31:58

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 31 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.69 ft
Screen Length 10 ft
Depth to Water 13.49 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2730004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.92 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	14:09:37	300.09	23.37	5.05	57.09	1.62	13.65	1.09	124.58
Last 5	14:14:37	600.03	21.81	5.06	59.31	0.66	13.65	1.08	108.08
Last 5	14:19:37	900.03	21.61	5.06	60.05	0.72	13.65	1.04	100.56
Last 5	14:24:37	1200.03	21.55	5.05	59.75	0.53	13.65	1.01	97.12
Last 5	14:29:37	1500.07	21.46	5.04	59.24	0.82	13.65	1.00	94.56
Variance 0			-0.20	-0.00	0.74			-0.04	-7.52
Variance 1			-0.06	-0.02	-0.31			-0.03	-3.44
Variance 2			-0.09	-0.00	-0.51			-0.01	-2.56

Notes

Purge started at 1404. Purge rate of 250 ml/min.
Parameters stable at 1429. Well sampled at 1440. Weather - partly cloudy 89F.

Grab Samples

GWC-3
1440

Product Name: Low-Flow System

Date: 2017-09-21 16:22:09

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 25.5 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.56 ft
Screen Length 10 ft
Depth to Water 9.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 48.6 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	15:59:10	1199.84	23.95	6.84	2425.56	0.38	12.61	0.18	91.37
Last 5	16:04:10	1499.84	23.89	6.87	2431.78	0.69	12.98	0.18	85.84
Last 5	16:09:10	1799.83	23.72	6.90	2430.69	0.40	13.25	0.17	82.01
Last 5	16:14:10	2099.84	24.04	6.91	2442.37	0.57	13.36	0.18	79.20
Last 5	16:19:10	2399.84	24.18	6.94	2420.57	0.31	13.44	0.17	77.37
Variance 0			-0.16	0.02	-1.09			-0.01	-3.83
Variance 1			0.32	0.01	11.68			0.01	-2.81
Variance 2			0.14	0.03	-21.80			-0.00	-1.84

Notes

Purge started at 1539. Purge rate of 200 ml/min.

Purge rate reduced to 150 ml/min at 1554. Purge rate reduced to 100 ml/min at 1609. Parameters stable at 1619. Well sampled at 1625. Weather - partly cloudy 89F.

Product Name: Low-Flow System

Date: 2017-09-20 10:54:32

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 48 ft

Pump placement from TOC 38 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.2 ft
Screen Length 10 ft
Depth to Water 12.18 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3042443 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.24 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	+/- 100
Last 5	10:31:05	300.10	22.18	6.46	96.70	1.07	12.65	0.47	104.45
Last 5	10:36:05	600.03	21.55	5.44	97.30	1.51	12.69	0.33	99.06
Last 5	10:41:05	900.03	21.31	5.29	97.35	1.31	12.70	0.26	94.74
Last 5	10:46:05	1200.03	21.32	5.26	96.52	1.09	12.70	0.20	91.69
Last 5	10:51:05	1500.03	21.28	5.25	96.29	1.15	12.70	0.17	88.86
Variance 0			-0.25	-0.15	0.05			-0.07	-4.32
Variance 1			0.02	-0.03	-0.83			-0.06	-3.05
Variance 2			-0.04	-0.01	-0.22			-0.03	-2.83

Notes

Purge started at 1026, 200 ml/min.
Parameters stable at 1051. Well sampled at 1100. Weather - cloudy 83 F.

Grab Samples

GWA-2A
1100

Product Name: Low-Flow System

Date: 2017-09-20 13:34:19

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 38 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 6.98 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2596101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 86 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			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	13:11:06	5399.85	22.09	4.71	71.76	7.20	13.83	0.49	98.46
Last 5	13:16:06	5699.85	22.01	4.72	71.27	5.35	13.97	0.50	97.41
Last 5	13:21:06	6000.49	21.86	4.74	70.90	4.54	14.10	0.50	96.57
Last 5	13:26:11	6304.85	21.73	4.73	70.40	4.37	14.14	0.50	96.13
Last 5	13:31:11	6604.85	21.82	4.72	71.26	4.20	14.17	0.49	96.90
Variance 0			-0.15	0.01	-0.37			-0.00	-0.84
Variance 1			-0.14	-0.00	-0.49			-0.00	-0.45
Variance 2			0.09	-0.01	0.86			-0.01	0.77

Notes

Purge started at 1141. 200 ml/min.
Purge rate reduced to 100 ml/min at 1211 in an attempt to lower turbidity. Parameters stable at 1331. Well sampled at 1340.

Grab Samples

GWA-2A
1340

Product Name: Low-Flow System

Date: 2017-09-20 17:14:10

Project Information:

Operator Name Victoria Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 23.5 ft

Pump placement from TOC 13.5 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 4.72 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1948904 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 9.24 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%	+/- 10		+/- 0.2	+/- 100
Last 5	16:49:05	9599.77	23.84	5.08	75.94	13.40	5.43	0.21	65.13
Last 5	16:54:05	9899.77	24.02	5.09	79.03	12.70	5.43	0.20	66.45
Last 5	16:59:05	10199.77	23.90	5.10	78.84	11.90	5.44	0.18	61.26
Last 5	17:04:06	10500.77	23.88	5.09	78.51	11.90	5.44	0.18	59.72
Last 5	17:09:06	10800.77	23.93	5.09	78.50	11.20	5.44	0.19	58.58
Variance 0			-0.11	0.00	-0.19			-0.02	-5.19
Variance 1			-0.02	-0.00	-0.33			-0.00	-1.54
Variance 2			0.04	-0.01	-0.01			0.01	-1.14

Notes

Purge started at 1409. Purge rate 100 ml/min.

Parameters stable excluding turbidity at 1709. Turbidity readings above 10 NTU for 3 hours of purging. One unfiltered and one filtered sample collected at 1515. Weather - clear 85F.

Grab Samples

GWA-3B

1515

GWA-3B (filtered)

1515

Product Name: Low-Flow System

Date: 2018-01-08 17:07:55

Project Information:

Operator Name A. Ellis
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 GWA-1A
Well diameter 2 in
Well Total Depth 38.04 ft
Screen Length 10 ft
Depth to Water 10.85 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.8 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	+/- 10
Last 5	16:47:12	300.08	17.85	5.64	54.49	0.34	11.00	1.06	88.59
Last 5	16:52:12	599.98	17.99	5.25	53.94	0.58	11.00	0.93	85.55
Last 5	16:57:12	899.98	18.04	5.24	53.67	1.31	11.00	0.90	84.33
Last 5	17:02:12	1199.98	17.99	5.26	54.16	1.47	11.00	0.84	83.88
Last 5									
Variance 0			0.13	-0.39	-0.54			-0.13	-3.04
Variance 1			0.05	-0.01	-0.28			-0.03	-1.22
Variance 2			-0.05	0.02	0.49			-0.06	-0.45

Notes

Purge time 1642/1702; GWA-1A sampled @ 1702

Grab Samples

GWA-1A
1702



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: 0372382 Sampling Date: 01/08/2018
 Site: Plant McIntosh Location: (circle one) LF3 LF4 AP Sampler's Name: H. Beaulieu
 Well ID: GWA-2A Pump Type/Model: Peristaltic Sample Collection Time: 1647
 Total Depth (ft): 43.20 Tubing Material: LDPE Sample Purge Rate (L/min): 200
 Depth to Water (ft): 16.15 Pump Intake Depth (ft): 38 Sample ID: GWA-2A-20180108-01
 Well Diameter (in): 2 Start/Stop Purge Time: 1618 / 1620 / 1645 Laboratory Analyses: See COC
 Well Volume (gal) = 0.041d²h: 4.44 Purge Rate (L/min): 100 / 200
 Well Volume (L) = gal * 3.785: 16.79 / 50.37 (x3) Total Purge Volume (L): 4.0
 d = well diameter (inches) h = length of water column (feet) Purge Method: Low Flow Well Volume Other:
 Well Type: Flush Slick Up Sampling Method: Pump Discharge Other:
 Well Lock: Yes No
 Well Bolted: Yes No Bolts Needed: none
 Well Cap Condition: Good Replace Other
 Well Tag Present: Yes No Water in Vault: Yes No

QA/QC Collected? no
QA/QC I.D. _____

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.)
1625	18.44	88.00	0.75	5.49	42.30	2.88	100	0.5	16.38	
1630	18.05	88.30	0.49	5.52	33.80	2.41	100	1.0	16.38	
1635	18.39	86.60	0.26	5.52	27.90	2.09	200	2.0	16.63	Purge rate increased
1640	18.51	85.10	0.21	5.51	25.30	1.75	200	3.0	16.63	
1645	18.45	84.70	0.18	5.52	23.20	1.40	200	4.0	16.63	
Sampled at 1647										
Total Depth: 43.20										
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: 2018-01-09 10:24:52

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 440275
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 28 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 11.56 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 22 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:50:04	900.02	16.44	4.83	76.34	4.56	12.72	0.85	73.30
Last 5	09:55:04	1200.02	16.65	4.81	75.24	4.14	12.93	0.78	73.36
Last 5	10:00:04	1500.02	16.65	4.82	73.84	4.09	13.11	0.75	71.29
Last 5	10:05:04	1800.02	16.67	4.82	73.37	4.91	13.22	0.75	70.93
Last 5	10:10:04	2100.02	16.75	4.83	73.28	4.91	13.39	0.79	69.72
Variance 0			-0.00	0.01	-1.40			-0.02	-2.07
Variance 1			0.02	0.00	-0.47			-0.01	-0.36
Variance 2			0.08	0.00	-0.09			0.05	-1.22

Notes

0935 began purge at 100mL/min; 1010 all parameters stable; 1015 sampled at 100mL/min.

Grab Samples

GWA-3A-20180108-01
Sampled at 1015

Product Name: Low-Flow System

Date: 2018-01-09 12:20:08

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 440275
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 25 ft

Pump placement from TOC 13.5 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 7.79 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2015856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 97 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	11:50:10	2699.94	17.63	4.92	79.52	3.15	10.33	0.37	51.94
Last 5	11:55:10	2999.94	17.77	4.92	81.27	2.92	10.44	0.29	51.63
Last 5	12:00:10	3299.94	17.88	4.94	80.62	2.66	9.98	0.43	50.75
Last 5	12:05:10	3599.94	17.99	4.97	80.00	2.86	9.78	0.38	50.55
Last 5	12:10:10	3899.94	18.10	4.97	80.61	2.27	9.67	0.38	50.39
Variance 0			0.11	0.02	-0.65			0.13	-0.88
Variance 1			0.12	0.03	-0.62			-0.05	-0.20
Variance 2			0.11	0.01	0.62			-0.00	-0.16

Notes

1105 began purge at 100 mL/min; 1115 water reaches flow cell; 1120 switch to well volumes purge method, increase purge rate to 500mL/min; 1135 1st well volume; 1150 2nd well volume; 1155 reduce purge rate to 250mL/min; 3rd well volume; 1210 all parameters stable. 1215 sampled at 250mL/

Grab Samples

GWA-3B-20180109-01
Sampled at 1215

Product Name: Low-Flow System

Date: 2018-01-09 12:16:07

Project Information:

Operator Name A. Ellis
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 30 ft

Pump placement from TOC 24 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 10 ft
Depth to Water 11.35 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 119.64 in
Total Volume Pumped 40 L

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	+/- 10
Last 5	11:50:40	10215.89	18.18	4.88	38.77	1.91	22.50	1.27	81.88
Last 5	11:55:41	10516.89	18.34	4.91	38.25	1.88	22.11	1.02	81.15
Last 5	12:00:41	10816.90	18.39	4.90	37.94	1.45	21.95	0.75	81.63
Last 5	12:05:41	11116.89	18.43	4.91	38.44	1.61	21.61	0.86	80.85
Last 5	12:10:41	11416.90	18.54	4.91	38.41	1.21	21.32	0.76	80.78
Variance 0			0.05	-0.00	-0.31			-0.27	0.48
Variance 1			0.04	0.01	0.50			0.10	-0.79
Variance 2			0.11	0.00	-0.03			-0.10	-0.06

Notes

Purge time 0900/1210; sampled @ 1210

Grab Samples

GWA-4-20180109-01
1210

Product Name: Low-Flow System

Date: 2018-01-09 15:20:26

Project Information:

Operator Name A. Ellis
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF3
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 23 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 9.90 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 111.96 in
Total Volume Pumped 41.5 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	+/- 10
Last 5	14:54:38	5999.98	18.66	4.32	121.62	3.72	22.21	4.93	265.61
Last 5	14:59:38	6299.98	18.72	4.33	121.22	2.91	21.36	5.27	266.53
Last 5	15:04:38	6599.96	18.70	4.37	121.00	3.44	21.01	6.10	265.26
Last 5	15:09:38	6899.96	18.70	4.37	120.59	3.76	19.87	6.19	265.74
Last 5	15:14:38	7200.00	18.74	4.40	120.12	3.14	19.23	6.38	265.84
Variance 0			-0.02	0.04	-0.22			0.83	-1.27
Variance 1			-0.00	-0.00	-0.41			0.09	0.49
Variance 2			0.04	0.03	-0.47			0.19	0.10

Notes

Purge time 1314/1514; sampled @ 1514

Grab Samples

GWA-5-20180109-01
1514



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: 0372382 Sampling Date: 01.10.2018
 Site: Plant McIntosh Location: (circle one) (F) LF4 AP Sampler's Name: A. ELLIS
 Well ID: GWA-7 Pump Type/Model: ALEXIS PERI Sample Collection Time: 13:16
 Total Depth (ft): 32.84 Tubing Material: LDPE Sample Purge Rate (L/min): 100
 Depth to Water (ft): 14.78 Pump Intake Depth (ft): 27 Sample ID: GWA-7.2018.0110-01
 Well Diameter (in): 2 Start/Stop Purge Time: 0901/1316 Laboratory Analyses: SEE COC
 Well Volume (gal) = 0.041d²h: 2.9 Purge Rate (L/min): 100
 Well Volume (L) = gal * 3.785: 11 Total Purge Volume (L): 25.5
 d = well diameter (inches) h = length of water column (feet)
 Purge Method: Low-Flow Well Volume Other:
 Well Type: Flush Stick Up Sampling Method: Pump Discharge Other:
 Well Lock: Yes No QA/QC Collected? NO
 Well Booled: Yes No Boils Needed: NO QA/QC I.D.: -
 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.)
0910	17.42	39.30	1.08	6.89	90.20	3.80	100	0.5	14.88	
0911	17.80	39.40	0.73	5.58	83.10	1.62	100	1.0	14.90	
0916	17.87	40.30	0.55	5.35	82.50	20.2	100	1.5	14.90	
0921	17.85	40.20	0.48	5.31	81.40	32.4	100	2	14.90	
0926	17.90	40.30	0.44	5.29	81.60	35.6	100	2.5	14.90	
0931	18.12	40.10	0.41	5.31	81.00	40.4	100	3	14.90	
0936	17.99	40.20	0.41	5.29	81.60	45.4	100	3.5	14.90	
0941	17.94	40.10	0.39	5.29	82.70	41.2	100	4	14.90	
0946	17.88	40.00	0.38	5.29	82.80	23.6	100	4.5	14.90	
0951	17.86	40.00	0.38	5.29	83.30	25.3	100	5	14.90	
0956	17.91	40.10	0.38	5.29	83.60	27.8	100	5.5	14.90	
1001	17.94	40.00	0.38	5.29	83.80	29.5	100	6	14.90	
1006	17.81	40.00	0.38	5.29	84.70	28.2	100	6.5	14.91	
1011	17.85	40.10	0.38	5.29	85.50	21.6	100	7	14.91	
1016	17.74	40.10	0.38	5.29	85.80	19.2	100	7.5	14.91	
1021	17.68	40.10	0.38	5.29	86.0	18.3	100	8	14.91	
1026	17.67	40.00	0.37	5.29	87.70	17.0	100	8.5	14.91	
1031	17.53	40.10	0.38	5.28	87.70	18.1	100	9	14.91	
1036	17.24	40.00	0.37	5.29	88.10	16.2	100	9.5	14.91	
1041	17.24	40.00	0.38	5.29	88.90	15.5	100	10	14.91	
1046	17.28	40.00	0.37	5.28	88.00	18.8	100	10.5	14.91	
1051	17.28	40.10	0.37	5.28	89.60	14.7	100	11	14.91	
Stabilizing Criteria ^{4,5}		+/- 5%	0.2 mg/L or 10% whichever is greater ⁹⁾	+/- 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:

1089769



GROUNDWATER SAMPLING LOG SHEET

Client: GPC Project No.: 0372382 Sampling Date: 01.10.2018
 Site: Plant McIntosh Location: (circle one) LF3 LF4 AP Sampler's Name: A. ELLIS
 Well ID: GWA-7 Pump Type/Model: ALEXIS PERI Sample Collection Time: 1310
 Total Depth (ft): 32.84 Tubing Material: LDPE Sample Purge Rate (L/min): 100
 Depth to Water (ft): 14.78 Pump Intake Depth (ft): 27 Sample ID: GWA-7-20180110-01
 Well Diameter (in): 2 Start/Stop Purge Time: 0901/1310 Laboratory Analyses: SEECOC
 Well Volume (gal) = 0.041d²h: 2.9 Purge Rate (L/min): 100
 Well Volume (L) = gal * 3.785: 11 Total Purge Volume (L): 25.5
 d = well diameter (inches) h = length of water column (feet) Purge Method: Low-Flow Well Volume Other:
 Well Type: Flush Stick Up Sampling Method: Pump Discharge Other:
 Well Lock: Yes No
 Well Bolted: Yes No Bolts Needed: No
 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.)
1050	17.01	40.10	0.37	5.28	89.20	11.8	100	11.5	14.91	
1101	17.28	40.10	0.37	5.28	89.60	13.9	100	12	14.91	
1106	16.95	40.20	0.37	5.27	90.60	11.5	100	12.5	14.91	
1111	17.05	40.20	0.37	5.27	91.80	17.3	100	13	14.91	
1116	17.05	40.20	0.36	5.27	91.60	16.4	100	13.5	14.91	
1121	17.01	40.10	0.36	5.27	91.70	12.3	100	14	14.91	
1126	17.18	40.30	0.36	5.27	93.00	11.5	100	14.5	14.91	
1131	17.29	40.00	0.35	5.28	92.30	12.4	100	15	14.91	
1136	17.29	40.00	0.36	5.28	92.30	12.3	100	15.5	14.91	
1141	17.18	40.00	0.35	5.28	92.30	12.4	100	16	14.91	
1146	17.23	40.10	0.35	5.27	92.90	13.6	100	16.5	14.91	
1151	17.18	40.10	0.35	5.27	93.10	13.6	100	17	14.91	
1156	17.18	40.20	0.36	5.27	93.40	13.6	100	17.5	14.91	
1201	17.21	40.30	0.36	5.28	93.80	13.2	100	18	14.91	
1206	17.23	40.20	0.36	5.27	94.30	13.8	100	18.5	14.91	
1211	17.09	40.30	0.36	5.27	94.60	11.08	100	19	14.91	
1216	17.35	40.30	0.36	5.26	94.40	12.1	100	19.5	14.91	
1221	17.32	40.30	0.36	5.28	94.90	10.35	100	20	14.91	
1226	17.41	40.30	0.37	5.29	94.40	12.3	100	20.5	14.91	
1231	17.48	40.20	0.37	5.27	96.30	11.00	100	21	14.91	
1236	17.59	40.10	0.36	5.28	95.60	8.85	100	21.5	14.91	
1241	17.72	40.30	0.37	5.22	99.20	10.35	100	22	14.91	
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	

9901

(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: 2018-01-09 09:41:46

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC-McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463068
Turbidity Make/Model LaMotte 2020 WE

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-1
Well diameter 2 in
Well Total Depth 32.96 ft
Screen Length 10 ft
Depth to Water 15.9 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2596101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.44 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%	+/- 5		+/- 0.2	+/- 10
Last 5	09:10:02	300.05	15.57	5.80	40.88	0.51	15.95	2.37	67.87
Last 5	09:15:02	600.04	17.59	5.02	39.20	1.05	16.01	1.97	62.43
Last 5	09:20:02	900.04	18.08	5.02	37.97	0.83	16.01	1.92	59.83
Last 5	09:25:02	1200.03	18.17	5.02	37.87	0.60	16.02	1.94	58.54
Last 5	09:30:02	1500.04	18.15	5.00	37.50	1.03	16.02	1.89	58.31
Variance 0			0.49	-0.00	-1.23			-0.05	-2.61
Variance 1			0.09	-0.00	-0.10			0.01	-1.29
Variance 2			-0.02	-0.01	-0.38			-0.05	-0.22

Notes

GWC-1 sampled at 0936. Purge rate: 100 mL/min, then 200 mL/min at 0915. Purge time: 0905 to 0930

Grab Samples

GWC-1-20180109-01
Sampled at 0936

Product Name: Low-Flow System

Date: 2018-01-09 11:24:15

Project Information:

Operator Name H. Beough
Company Name ERM
Project Name GPC-McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463068
Turbidity Make/Model LaMotte 2020 WE

Pump Information:

Pump Model/Type ALEXIS Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.34 ft
Screen Length 10 ft
Depth to Water 14.76 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:51:46	1200.04	20.08	4.97	50.15	0.98	14.86	1.76	37.89
Last 5	10:56:46	1500.04	20.06	4.96	50.08	0.89	14.86	1.76	37.77
Last 5	11:01:46	1800.03	20.09	4.98	49.79	0.77	14.86	1.76	36.38
Last 5	11:06:46	2100.03	20.12	4.97	49.95	0.87	14.86	1.75	36.59
Last 5	11:11:46	2400.03	20.21	4.97	49.74	0.82	14.86	1.76	36.11
Variance 0			0.03	0.01	-0.29			0.00	-1.39
Variance 1			0.03	-0.01	0.16			-0.00	0.21
Variance 2			0.09	-0.00	-0.22			0.00	-0.48

Notes

GWC-2 sampled at 1116. Purge rate: 200 mL/min. Purge time: 1031 to 1111. pH below 5

Grab Samples

GWC-2-20180109-01
Sample time: 1116

Product Name: Low-Flow System

Date: 2018-01-09 13:24:08

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC-McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463068
Turbidity Make/Model LaMotte 2020 WE

Pump Information:

Pump Model/Type ALEXIS Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 31 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.69 ft
Screen Length 10 ft
Depth to Water 18.87 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2730004 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			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:54:25	300.05	19.50	5.10	63.32	0.67	19.06	1.11	40.99
Last 5	12:59:25	600.05	19.49	5.12	63.63	0.70	19.06	1.03	39.89
Last 5	13:04:25	900.05	19.55	5.13	63.37	0.96	19.06	0.99	38.74
Last 5	13:09:25	1200.04	19.55	5.13	64.02	0.91	19.06	0.98	39.12
Last 5	13:14:25	1500.04	19.55	5.13	63.68	0.75	19.06	0.97	39.04
Variance 0			0.05	0.01	-0.26			-0.04	-1.15
Variance 1			0.01	-0.01	0.65			-0.01	0.38
Variance 2			-0.01	0.01	-0.34			-0.01	-0.09

Notes

GWC-3 sampled at 1321. Purge rate: 200 mL/min. Purge time: 1249 to 1314

Grab Samples

GWC-3-20180109-01
Sample time: 1321

Product Name: Low-Flow System

Date: 2018-01-09 15:12:51

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC-McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463068
Turbidity Make/Model LaMotte 2020 WE

Pump Information:

Pump Model/Type ALEXIS Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 32 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.96 ft
Screen Length 10 ft
Depth to Water 16.58 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 9.48 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%	+/- 5		+/- 0.2	+/- 10
Last 5	14:40:18	300.06	20.58	4.87	70.93	4.10	17.31	0.36	34.37
Last 5	14:45:18	600.05	20.66	4.83	71.40	2.74	17.36	0.23	33.16
Last 5	14:50:18	900.04	20.70	4.81	71.90	1.41	17.38	0.18	31.53
Last 5	14:55:18	1200.04	20.71	4.80	72.18	1.21	17.38	0.16	30.40
Last 5	15:00:18	1500.04	20.77	4.79	72.40	0.99	17.37	0.15	30.08
Variance 0			0.04	-0.01	0.50			-0.05	-1.63
Variance 1			0.01	-0.01	0.28			-0.02	-1.14
Variance 2			0.06	-0.01	0.22			-0.01	-0.32

Notes

GWC-4A sampled at 1510. Purge rate: 200 mL/min. Purge time: 1435 to 1500

Grab Samples

GWC-4A-20180109-01
Sample time: 1510

Product Name: Low-Flow System

Date: 2018-01-09 16:38:44

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC-McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463068
Turbidity Make/Model LaMotte 2020 WE

Pump Information:

Pump Model/Type ALEXIS Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 24 ft

Pump placement from TOC 14.5 ft

Well Information:

Well ID GWC-4B
Well diameter 2 in
Well Total Depth 14.74 ft
Screen Length 10 ft
Depth to Water 13.79 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.04 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	+/- 10
Last 5	16:05:02	300.07	19.97	4.65	82.35	0.48	13.88	0.89	39.74
Last 5	16:10:02	600.05	19.89	4.66	83.58	3.12	13.92	0.79	37.41
Last 5	16:15:02	900.05	19.86	4.65	92.32	0.66	13.95	1.07	37.27
Last 5	16:20:02	1200.05	19.83	4.65	92.33	0.70	13.95	1.05	36.46
Last 5	16:25:02	1500.04	19.77	4.65	91.91	0.52	13.96	0.99	36.28
Variance 0			-0.04	-0.00	8.74			0.28	-0.14
Variance 1			-0.02	-0.00	0.01			-0.03	-0.82
Variance 2			-0.06	-0.00	-0.41			-0.05	-0.17

Notes

GWC-4B sampled at 1635. Purge rate: 100 mL/min. Purge time: 1600 to 1625

Grab Samples

GWC-4B-20180109-01
sample time: 1635

DUP-1-20180109-01
Duplicate

Product Name: Low-Flow System

Date: 2018-01-09 16:55:58

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 440275
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 25 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.56 ft
Screen Length 10 ft
Depth to Water 15.50 ft

Pumping Information:

Final Pumping Rate 500 mL/min
Total System Volume 0.2596101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 181 in
Total Volume Pumped 27.25 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	16:05:20	3001.02	20.19	7.37	3696.53	6.84	27.02	3.51	179.01
Last 5	16:10:20	3301.02	20.04	7.45	3896.71	1.72	27.63	0.13	178.19
Last 5	16:15:21	3601.94	20.08	7.40	3555.00	2.59	28.61	2.14	180.11
Last 5	16:20:24	3904.94	19.99	7.45	3850.44	2.83	29.42	0.45	180.15
Last 5	16:25:26	4206.94	19.99	7.39	3457.56	4.76	29.65	3.12	181.14
Variance 0			0.04	-0.05	-341.70			2.01	1.92
Variance 1			-0.09	0.06	295.44			-1.69	0.04
Variance 2			0.00	-0.07	-392.88			2.68	1.00

Notes

1515 start purge at 250mL/min; 1535 increase purge rate to 500mL/min; 1610 purge rate slows to 300mL/min; 1620 purge slowed to 250mL/min; 1625 well dry. Recharge will be Sample tomorrow.

Grab Samples

Product Name: Low-Flow System

Date: 2018-01-09 14:22:16

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name LF 3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 440275
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 27 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.64 ft
Screen Length 10 ft
Depth to Water 17.92 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 177 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			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:35:44	1500.02	19.95	4.99	51.83	26.10	29.97	0.87	51.37
Last 5	13:40:44	1800.02	20.04	5.14	54.33	57.50	31.00	3.48	52.65
Last 5	13:45:46	2102.03	19.97	5.15	57.98	13.00	31.50	3.22	52.14
Last 5	13:50:46	2402.03	19.86	5.02	54.18	12.90	31.71	2.41	51.60
Last 5	13:55:53	2709.03	19.77	5.25	48.69	8.03	31.99	6.83	56.57
Variance 0			-0.07	0.01	3.66			-0.25	-0.51
Variance 1			-0.11	-0.13	-3.80			-0.82	-0.54
Variance 2			-0.09	0.23	-5.49			4.42	4.96

Notes

1310 began purge at 250mL/min; 1325 switch to well volumes purge method, increase purge rate to 500mL/min; 1335 purge rate slowed to 200 mL/min; 1345 purge rate slowed to 100mL/min; 1355 well dry. Recharge will be sampled tomorrow

Grab Samples

Water Level Measurement Data Sheet
Plant McIntosh
Georgia Power Company



Date: 3/26/2018
 Gauged by P. Adams & J. Noles

Area	Well ID	Total Depth (ft btoc)	Measured Depth to Water (ft btoc)	Measured Depth to Bottom (ft btoc)	January 2017 Depth to Water (ft btoc)	January 2017 Depth to Bottom (ft btoc)	Notes
Landfill No. 3	GWA-1	32.96	10.84	32.91	9.93	32.90	
	GWA-1A	38.10	11.82	38.09	10.84	38.02	
	GWA-2	33.75	11.86	33.71	11.03	33.72	
	GWA-2A	43.20	17.21	43.24	16.15	43.20	
	GWA-3A	33.88	12.78	33.87	11.52	33.86	
	GWA-3B	18.56	7.78	18.56	7.73	18.55	
	GWA-4	29.16	12.74	29.15	11.28	29.15	
	GWA-5	28.44	11.63	28.44	9.89	28.41	
	GWA-7	32.84	15.92	32.94	14.75	32.80	
	GWC-1	32.53	17.55	32.55	15.83	32.51	
	GWC-2	37.34	16.61	37.35	14.72	37.31	
	GWC-3	36.69	20.51	36.69	18.81	36.67	
	GWC-4A	36.96	18.41	36.95	16.53	36.93	
	GWC-4B	14.74	DRY	14.62	13.69	14.70	
GWC-5	30.56	17.08	30.55	15.46	30.54		
GWC-6	32.64	19.96	32.61	17.97	32.61		

Notes:
 ft = feet
 NM = Not Measured
 btoc = below top of casing

Product Name: Low-Flow System

Date: 2018-03-27 12:03:11

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 38 ft

Pump placement from TOC 1 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.09 ft
Screen Length 5 ft
Depth to Water 11.82 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2697338 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 4.0 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	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	11:42:13	300.09	17.00	5.24	56.57	1.32	11.92	1.19	68.95
Last 5	11:47:13	600.04	17.37	5.27	55.44	1.35	11.93	1.07	64.46
Last 5	11:52:13	900.04	17.37	5.29	55.52	1.33	11.93	1.04	62.39
Last 5	11:57:13	1200.04	17.49	5.28	55.25	1.66	11.93	0.99	61.07
Last 5									
Variance 0			0.36	0.03	-1.12			-0.12	-4.48
Variance 1			0.01	0.01	0.08			-0.03	-2.07
Variance 2			0.12	-0.01	-0.27			-0.05	-1.33

Notes

Smart Troll stopped reading at 12:14 for an unknown reason. Began new readings at 12:17. There are two sampling sheets. One has four readings and the other has 3. This is sheet 1 of 2. Sample Time: 12:35.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-27 12:33:12

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 38 ft

Pump placement from TOC 1 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.09 ft
Screen Length 5 ft
Depth to Water 11.82 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2697338 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 4.0 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	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	12:21:58	300.05	17.41	5.29	55.69	1.08	11.93	1.24	59.67
Last 5	12:26:58	600.04	17.70	5.28	55.06	1.54	11.93	1.06	58.77
Last 5	12:31:58	900.04	17.85	5.27	55.29	1.08	11.94	0.95	58.00
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.29	-0.01	-0.63			-0.17	-0.90
Variance 2			0.15	-0.00	0.24			-0.11	-0.76

Notes

2 of 2

Smart Troll stopped reading at 12:14 for an unknown reason. Began new readings at 12:17. There are two sampling sheets. One has four readings and the other has 3. This is sheet 2 of 2. Sample Time: 12:35

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-27 12:44:15

Project Information:

Operator Name P. Adams
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020We

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 33 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.24 ft
Screen Length 10 ft
Depth to Water 17.21 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.2596101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.2 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			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	12:16:13	900.03	18.26	5.30	79.55	1.74	17.53	0.89	125.97
Last 5	12:21:13	1200.03	18.43	5.32	81.64	1.81	17.54	0.89	125.58
Last 5	12:26:13	1500.03	18.47	5.32	84.09	0.73	17.55	0.56	125.45
Last 5	12:31:13	1800.03	18.56	5.31	84.65	0.95	17.56	0.47	125.76
Last 5	12:36:13	2100.03	18.58	5.32	85.01	0.78	17.56	0.43	125.47
Variance 0			0.04	0.01	2.45			-0.33	-0.14
Variance 1			0.09	-0.01	0.56			-0.09	0.31
Variance 2			0.02	0.01	0.36			-0.05	-0.29

Notes

Sample time:
Sampled at 12:50PM.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-27 17:29:08

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 35 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.87 ft
Screen Length 10 ft
Depth to Water 12.78 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2555443 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 28.68 in
Total Volume Pumped 21 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	17:00:37	10546.06	19.05	4.92	65.72	7.88	15.20	1.98	67.33
Last 5	17:05:38	10846.19	18.96	4.92	65.81	8.05	15.21	1.89	67.53
Last 5	17:10:39	11148.06	18.92	4.93	65.61	8.34	15.15	2.16	67.73
Last 5	17:15:39	11448.06	18.95	4.92	65.67	8.60	15.17	1.92	67.59
Last 5	17:20:39	11748.05	18.93	4.91	65.90	8.40	15.17	1.80	67.91
Variance 0			-0.04	0.01	-0.20			0.26	0.20
Variance 1			0.04	-0.01	0.06			-0.24	-0.15
Variance 2			-0.02	-0.01	0.22			-0.12	0.32

Notes

Turbidity remained above 5 NTU but under 10 NTU. Purged for 3 hours and then sampled at 1735.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 10:34:06

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 21 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 7.78 ft

Pumping Information:

Final Pumping Rate 116 mL/min 0.18
Total System Volume 93266 L 300 sec
Calculated Sample Rate 6.24 in
Stabilization Drawdown 3.5 L
Total Volume Pumped

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	+/- 10
Last 5	09:58:34	600.04	17.08	4.80	71.97	2.66	8.12	2.82	70.10
Last 5	10:03:34	900.04	17.18	4.80	71.87	1.82	8.18	2.72	68.88
Last 5	10:08:34	1200.04	17.18	4.80	71.95	2.03	8.23	2.60	68.17
Last 5	10:13:34	1500.04	17.22	4.80	72.52	2.29	8.27	2.44	67.84
Last 5	10:18:34	1800.04	17.40	4.80	72.42	1.47	8.30	2.42	67.52
Variance 0			0.00	-0.00	0.08			-0.12	-0.71
Variance 1			0.04	-0.00	0.57			-0.16	-0.33
Variance 2			0.18	0.00	-0.10			-0.02	-0.32

Notes

Sample Time 10:20

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-27 14:53:39

Project Information:

Operator Name P. Adams
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020We

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 29 ft

Pump placement from TOC 1 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.15 ft
Screen Length 10 ft
Depth to Water 12.74 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2194393 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 56.16 in
Total Volume Pumped 6.2 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			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 0
Last 5	14:31:45	1200.03	18.69	4.97	39.48	0.81	15.54	6.31	157.26
Last 5	14:36:45	1500.03	18.66	4.99	39.21	1.38	16.38	6.30	155.41
Last 5	14:41:45	1800.02	18.78	4.99	39.26	1.11	16.76	6.27	154.03
Last 5	14:46:45	2100.02	18.84	4.99	39.45	0.92	17.14	6.20	152.60
Last 5	14:51:45	2400.02	18.90	4.97	39.82	0.77	17.39	5.97	152.05
Variance 0			0.13	-0.00	0.05			-0.04	-1.39
Variance 1			0.05	0.00	0.19			-0.07	-1.43
Variance 2			0.07	-0.02	0.38			-0.23	-0.55

Notes

Sampled at 15:30. SmarTroll stopped recording for unknown reason at 14:52, before H2O depth stabilized Continued purging until 15:11. See hand log.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-27 17:38:11

Project Information:

Operator Name P. Adams
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020We

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 1 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 11.63 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 71.64 in
Total Volume Pumped 9.3 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	17:15:05	3604.01	18.65	4.05	168.38	5.88	17.30	0.64	381.61
Last 5	17:20:05	3904.01	18.69	4.03	168.84	5.04	17.39	0.68	384.70
Last 5	17:25:05	4204.01	18.69	4.10	169.57	4.95	17.49	0.76	370.51
Last 5	17:30:05	4504.01	18.70	4.11	163.44	4.84	17.54	0.73	364.76
Last 5	17:35:05	4804.00	18.73	4.11	164.54	4.77	17.60	0.88	362.82
Variance 0			-0.00	0.07	0.73			0.08	-14.19
Variance 1			0.01	0.01	-6.13			-0.04	-5.75
Variance 2			0.03	0.00	1.11			0.15	-1.94

Notes

Sampled at 17:50

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 13:11:54

Project Information:

Operator Name P. Adams
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 32 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.94 ft
Screen Length 10 ft
Depth to Water 15.92 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.72 in
Total Volume Pumped 20.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:48:17	11110.97	21.45	5.11	38.69	10.30	15.98	0.97	100.90
Last 5	12:53:22	11415.97	21.87	5.10	38.56	9.98	15.98	0.91	101.36
Last 5	12:58:22	11715.96	22.08	5.09	38.47	9.90	15.98	1.22	101.81
Last 5	13:03:22	12015.96	22.29	5.12	38.18	9.89	15.98	1.48	101.09
Last 5	13:08:24	12317.96	22.54	5.13	38.21	9.79	15.98	0.96	101.04
Variance 0			0.20	-0.01	-0.08			0.30	0.45
Variance 1			0.21	0.03	-0.30			0.26	-0.72
Variance 2			0.25	0.01	0.03			-0.52	-0.05

Notes

Sampled at 13:40

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 14:09:48

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 32 ft

Pump placement from TOC 1 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.55 ft
Screen Length 10 ft
Depth to Water 17.55 ft

Pumping Information:

Final Pumping Rate 122 mL/min
Total System Volume 0.2413548 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:39:28	600.06	20.73	5.10	37.47	0.32	17.61	1.97	92.29
Last 5	13:44:28	900.04	20.37	5.09	37.30	1.08	17.61	1.91	92.83
Last 5	13:49:28	1200.04	20.36	5.09	37.29	1.07	17.61	1.86	92.87
Last 5	13:54:28	1500.04	20.39	5.08	37.32	1.48	17.62	1.82	93.47
Last 5	13:59:28	1800.04	20.31	5.08	37.33	1.15	17.62	1.80	93.45
Variance 0			-0.02	0.00	-0.01			-0.05	0.04
Variance 1			0.03	-0.01	0.02			-0.04	0.60
Variance 2			-0.08	-0.00	0.02			-0.01	-0.02

Notes

Sample Time 14:05. DUP-01 was taken here.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-29 10:59:12

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 38 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.35 ft
Screen Length 10 ft
Depth to Water 16.61 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2697338 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.36 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			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:32:20	2400.04	20.60	5.18	49.85	0.62	16.70	3.05	66.34
Last 5	10:37:20	2700.04	20.57	5.15	48.91	0.70	16.70	2.84	66.47
Last 5	10:42:20	3000.04	20.66	5.16	49.57	0.63	16.65	2.72	66.67
Last 5	10:47:20	3300.05	21.19	5.13	48.81	0.80	16.64	2.58	66.90
Last 5	10:52:20	3600.04	21.27	5.15	49.38	0.92	16.67	2.58	67.28
Variance 0			0.09	0.01	0.66			-0.11	0.20
Variance 1			0.53	-0.03	-0.75			-0.14	0.23
Variance 2			0.08	0.02	0.57			-0.00	0.38

Notes

Began purging at 0952. Reached stabilization at 10:52. Sampled the well at 10:58.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 16:19:31

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 38 ft

Pump placement from TOC 1.5 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.69 ft
Screen Length 10 ft
Depth to Water 20.51 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2697338 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.12 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:48:15	900.04	21.05	5.16	62.35	2.74	20.54	1.29	88.25
Last 5	15:53:15	1200.04	20.83	5.16	61.50	1.89	20.54	1.25	87.08
Last 5	15:58:15	1500.04	20.65	5.16	61.39	0.80	20.54	1.19	86.89
Last 5	16:03:15	1800.05	20.59	5.16	61.21	2.69	20.52	1.14	86.66
Last 5	16:08:15	2100.04	20.63	5.16	61.37	1.23	20.52	1.13	86.70
Variance 0			-0.18	0.00	-0.11			-0.06	-0.19
Variance 1			-0.06	-0.00	-0.18			-0.04	-0.24
Variance 2			0.04	0.00	0.15			-0.01	0.04

Notes

Started purging at 15:23. Collected sample at 16:10. DUP-02 collected.

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 15:08:59

Project Information:

Operator Name J. Moles
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364455
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 37 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.95 ft
Screen Length 10 ft
Depth to Water 18.30 ft

Pumping Information:

Final Pumping Rate 105 mL/min
Total System Volume 0.265004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.8 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:39:34	600.02	23.29	4.46	64.38	1.18	18.68	1.15	395.28
Last 5	14:44:34	900.02	23.05	4.52	64.78	1.70	18.71	0.99	478.40
Last 5	14:49:35	1201.01	22.90	4.51	65.86	1.23	18.73	0.92	532.11
Last 5	14:54:35	1501.00	22.59	4.46	66.64	1.65	18.73	0.89	574.34
Last 5	14:59:35	1800.99	22.60	4.44	66.68	2.53	18.70	0.82	598.59
Variance 0			-0.15	-0.01	1.09			-0.07	53.71
Variance 1			-0.31	-0.06	0.78			-0.04	42.23
Variance 2			0.01	-0.01	0.04			-0.07	24.25

Notes

Collected sample at 1508

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 15:35:17

Project Information:

Operator Name P. Adams
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020We

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.55 ft
Screen Length 10 ft
Depth to Water 17.08 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 39.24 in
Total Volume Pumped 5.5 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:10:37	2100.02	23.38	7.34	3407.10	1.29	19.80	0.95	196.76
Last 5	15:15:37	2400.03	23.77	7.33	3400.50	1.32	19.99	1.13	197.00
Last 5	15:20:37	2700.02	24.09	7.32	3374.02	0.26	20.07	2.06	197.46
Last 5	15:25:37	3000.02	23.76	7.33	3331.75	0.84	20.19	1.84	197.85
Last 5	15:30:37	3300.02	24.05	7.31	3330.05	1.33	20.35	1.93	198.00
Variance 0			0.32	-0.01	-26.48			0.93	0.46
Variance 1			-0.33	0.01	-42.27			-0.22	0.39
Variance 2			0.29	-0.02	-1.70			-0.91	0.15

Notes

Sampled at 16:00

Grab Samples

Product Name: Low-Flow System

Date: 2018-03-28 12:39:39

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name GPC - Plant McIntosh
Site Name LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364456
Turbidity Make/Model LaMotte 2020 We

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .175 in
Tubing Length 37 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.61 ft
Screen Length 10 ft
Depth to Water 19.96 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.265004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 103.08 in
Total Volume Pumped 4.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:03:36	1800.04	21.10	5.17	45.39	2.05	23.75	4.58	68.89
Last 5	12:08:36	2100.04	21.68	5.17	45.40	2.05	24.38	4.58	68.93
Last 5	12:13:36	2400.04	22.04	5.16	45.24	1.86	24.98	4.42	68.64
Last 5	12:18:36	2700.04	22.28	5.16	45.31	1.36	25.41	4.37	68.96
Last 5	12:23:36	3000.04	22.75	5.14	46.04	--	--	5.58	72.68
Variance 0			0.36	-0.00	-0.16			-0.16	-0.29
Variance 1			0.24	-0.01	0.07			-0.05	0.33
Variance 2			0.47	-0.02	0.73			1.21	3.72

Notes

Well pumped dry at 12:22. Total water purged 4.9 L. Returned 3/29/18, DTW: 23.90. Sample Time: 0820 Final DTW: 28.55

Grab Samples

Water Level Measurement Data Sheet
 Plant McIntosh
 Georgia Power Company



Date: 7/9/2018

Gauged by: P. Adams, L. Coker, J. Noles

Area	Well ID	Total Installed Depth (ft btoc)	Measured Depth to Water (ft btoc)	Measured Depth to Bottom (ft btoc)	Provided for reference		Notes
					January 2018 Depth to Water (ft btoc)	January 2018 Depth to Bottom (ft btoc)	
Landfill No. 3	GWA-1	32.96	12.03	32.92	9.93	32.90	Soft bottom
	GWA-1A	38.10	12.86	38.10	10.84	38.02	Hard bottom
	GWA-2	33.75	13.19	33.81	11.03	33.72	Soft bottom
	GWA-2A	43.20	17.75	43.24	16.15	43.20	Soft bottom
	GWA-3A	33.88	13.74	33.88	11.52	33.86	Soft bottom
	GWA-3B	18.56	11.05	18.56	7.73	18.55	Hard bottom
	GWA-4	29.16	13.63	29.15	11.28	29.15	Soft bottom
	GWA-5	28.44	12.55	28.46	9.89	28.41	Soft bottom
	GWA-7	32.84	16.55	32.80	14.75	32.80	Very soft bottom
	GWC-1	32.53	18.10	32.55	15.83	32.51	Hard bottom
	GWC-2	37.34	17.25	37.35	14.72	37.31	Soft bottom
	GWC-3	36.69	20.60	36.70	18.81	36.67	Hard bottom
	GWC-4A	36.96	19.01	37.00	16.53	36.93	Soft bottom
	GWC-4B	14.74	DRY	14.71	13.69	14.70	N/A
GWC-5	30.56	17.66	30.54	15.46	30.54	Slightly soft bottom	
GWC-6	32.64	20.04	32.62	17.97	32.61	Hard bottom	

Notes:

ft = feet

NA - Not Applicable

NM = Not Measured

btoc = below top of casing

January 2018 depths measured by ERM

Product Name: Low-Flow System

Date: 2018-07-10 09:42:13

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 28 ft

Pump placement from TOC 4 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.10 ft
Screen Length 10 ft
Depth to Water 12.86 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.8 in
Total Volume Pumped 4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	09:20:18	1201.01	21.10	5.16	52.35	0.51	12.96	1.14	163.15
Last 5	09:25:18	1501.00	20.94	5.17	52.52	0.65	13.00	1.05	157.04
Last 5	09:30:18	1801.00	20.87	5.16	52.49	0.37	13.03	1.04	151.46
Last 5	09:35:18	2100.99	20.74	5.17	52.52	0.32	13.01	0.99	147.10
Last 5	09:40:18	2400.98	20.70	5.17	52.76	0.35	13.01	0.97	143.28
Variance 0			-0.07	-0.00	-0.03			-0.01	-5.58
Variance 1			-0.13	0.00	0.04			-0.05	-4.36
Variance 2			-0.04	0.00	0.23			-0.02	-3.81

Notes

Sampled at 09:40

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 10:35:06

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589972
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Perisaltic
Tubing Type LDPE
Tubing Diameter .170 in
Tubing Length 33 ft

Pump placement from TOC 2.0 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.2 ft
Screen Length 10 ft
Depth to Water 17.88 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.84 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			+/- 0.5	+/- 1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	09:54:58	900.12	22.12	5.44	81.10	0.61	17.95	0.71	129.11
Last 5	09:59:58	1200.12	22.19	5.44	80.71	1.25	17.94	0.70	123.44
Last 5	10:04:58	1500.12	22.14	5.44	80.74	0.74	17.95	0.68	120.52
Last 5	10:09:58	1800.12	22.05	5.44	80.95	0.82	17.95	0.62	115.94
Last 5	10:14:58	2100.12	22.31	5.44	81.03	--	--	0.73	113.49
Variance 0			-0.05	-0.00	0.03			-0.02	-2.92
Variance 1			-0.09	-0.00	0.22			-0.06	-4.58
Variance 2			0.26	0.00	0.07			0.10	-2.45

Notes

GWA-2A sampled at 1015.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 10:33:46

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589976
Turbidity Make/Model LaMotte 2020 we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 13.72 ft

Pumping Information:

Final Pumping Rate 110 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18.84 in
Total Volume Pumped 3.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	10:06:09	600.02	21.76	4.87	63.98	3.25	14.62	1.96	150.56
Last 5	10:11:09	900.01	21.46	4.86	64.03	2.84	14.91	1.90	145.57
Last 5	10:16:11	1202.01	21.93	4.87	64.14	2.87	15.07	1.87	142.81
Last 5	10:21:11	1502.00	21.89	4.87	63.89	2.49	15.19	1.83	139.92
Last 5	10:26:11	1801.99	21.84	4.87	63.86	2.41	15.29	1.81	137.76
Variance 0			0.47	0.00	0.12			-0.03	-2.76
Variance 1			-0.04	0.01	-0.25			-0.04	-2.88
Variance 2			-0.04	-0.00	-0.04			-0.02	-2.16

Notes

Collected at 1028 7/10/2018

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 11:59:56

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589976
Turbidity Make/Model LaMotte 2020 we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 16 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 11.15 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1614148 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.72 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	11:34:51	1200.01	23.23	4.91	105.50	9.29	11.46	0.24	96.45
Last 5	11:39:51	1500.00	23.01	4.89	104.61	7.37	11.50	0.24	98.93
Last 5	11:44:52	1800.99	23.14	4.86	103.06	6.68	11.57	0.24	99.54
Last 5	11:49:52	2100.98	23.16	4.84	103.31	5.22	11.65	0.43	95.51
Last 5	11:54:52	2400.98	23.17	4.80	103.00	3.88	11.71	0.43	93.45
Variance 0			0.13	-0.03	-1.55			0.01	0.61
Variance 1			0.02	-0.02	0.25			0.19	-4.04
Variance 2			0.01	-0.03	-0.31			-0.00	-2.05

Notes

Collected 7/10/2018 1157

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 13:20:20

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589972
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Perisaltic
Tubing Type LDPE
Tubing Diameter .170 in
Tubing Length 24 ft

Pump placement from TOC 2.0 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29 ft
Screen Length 10 ft
Depth to Water 13.67 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1971222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 61.92 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	12:55:58	4801.28	25.06	4.98	40.65	0.99	18.25	3.66	126.13
Last 5	13:00:58	5101.28	25.41	4.95	36.64	1.10	18.42	3.13	126.80
Last 5	13:05:58	5401.28	24.73	4.95	40.96	0.99	18.58	3.08	127.40
Last 5	13:10:58	5701.28	24.72	4.94	41.46	0.89	18.66	3.07	125.87
Last 5	13:15:58	6001.28	23.96	4.94	41.55	0.87	18.83	2.93	124.03
Variance 0			-0.68	0.00	4.32			-0.05	0.60
Variance 1			-0.00	-0.00	0.50			-0.01	-1.53
Variance 2			-0.76	-0.00	0.09			-0.14	-1.84

Notes

GWA-4 sample collected at 1325.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 14:30:34

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589976
Turbidity Make/Model LaMotte 2020 we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 12.61 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 31.08 in
Total Volume Pumped 6.5 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	14:07:07	2699.97	22.54	4.64	133.36	5.86	14.78	0.18	196.18
Last 5	14:12:07	2999.97	22.87	4.63	133.60	5.65	14.89	0.18	197.75
Last 5	14:17:07	3299.96	22.96	4.63	132.12	5.45	15.00	0.17	197.92
Last 5	14:22:07	3599.95	23.21	4.62	133.44	5.17	15.10	0.17	200.03
Last 5	14:27:07	3899.95	23.10	4.62	132.96	4.93	15.20	0.16	202.73
Variance 0			0.09	-0.00	-1.48			-0.01	0.17
Variance 1			0.25	-0.01	1.32			-0.01	2.10
Variance 2			-0.12	-0.00	-0.48			-0.01	2.70

Notes

Sampled 7/10/2018 1427

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 12:18:31

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.80 ft
Screen Length 10 ft
Depth to Water 16.55 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.92 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	11:52:21	4199.94	22.26	5.23	39.65	23.20	16.70	0.56	192.31
Last 5	11:57:21	4499.93	22.31	5.23	39.41	21.40	16.70	0.56	195.96
Last 5	12:02:21	4799.93	22.49	5.23	39.58	22.20	16.70	0.50	200.83
Last 5	12:07:21	5099.92	22.46	5.23	39.37	20.10	16.70	0.48	205.67
Last 5	12:12:21	5399.90	22.53	5.23	39.42	25.80	16.71	0.49	210.13
Variance 0			0.19	-0.00	0.17			-0.06	4.87
Variance 1			-0.03	0.01	-0.20			-0.02	4.84
Variance 2			0.07	-0.00	0.05			0.01	4.46

Notes

Sampled at 12:15/ GWA-7-Filtered sampled at 12:35

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 09:19:28

Project Information:

Operator Name P. Adams
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463068
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 32 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.55 ft
Screen Length 10 ft
Depth to Water 18.1 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 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	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	08:56:19	600.02	20.76	5.07	36.66	2.97	18.80	1.59	89.19
Last 5	09:01:19	900.01	20.75	5.07	36.60	1.13	18.80	1.60	88.87
Last 5	09:06:19	1200.00	20.70	5.07	36.48	1.65	18.80	1.80	88.68
Last 5	09:11:19	1500.00	20.70	5.06	36.37	1.44	18.90	1.73	88.47
Last 5	09:16:19	1799.99	20.75	5.07	36.36	1.20	18.90	1.81	88.37
Variance 0			-0.04	-0.00	-0.13			0.19	-0.19
Variance 1			-0.00	-0.00	-0.10			-0.07	-0.20
Variance 2			0.04	0.00	-0.01			0.08	-0.10

Notes

Sampled at 9:25

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:52:37

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589972
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Perisaltic
Tubing Type LDPE
Tubing Diameter .170 in
Tubing Length 22 ft

Pump placement from TOC 2.0 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37 ft
Screen Length 10 ft
Depth to Water 17.24 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.1881953 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.48 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			+/- 0.5	+/- 1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	15:30:01	600.02	26.78	5.41	62.22	1.60	17.28	1.92	158.03
Last 5	15:35:01	900.02	27.31	5.41	62.21	2.26	17.28	1.88	153.41
Last 5	15:40:01	1200.02	26.57	5.40	61.81	0.48	17.28	1.83	151.15
Last 5	15:45:02	1500.26	26.74	5.38	60.41	1.52	17.28	1.85	145.43
Last 5	15:50:02	1800.25	26.92	5.37	60.53	1.58	17.28	1.85	144.76
Variance 0			-0.74	-0.01	-0.40			-0.05	-2.26
Variance 1			0.17	-0.02	-1.40			0.03	-5.72
Variance 2			0.17	-0.01	0.12			-0.01	-0.67

Notes

GWC-2 sampled at 1555.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 16:36:50

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 31 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.70 ft
Screen Length 10 ft
Depth to Water 20.60 ft

Pumping Information:

Final Pumping Rate 120 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.32 in
Total Volume Pumped 3.4 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	16:13:21	600.02	23.93	5.20	61.37	3.94	20.50	1.35	329.52
Last 5	16:18:21	900.02	23.50	5.17	61.51	3.10	20.51	1.27	315.13
Last 5	16:23:21	1200.01	23.18	5.18	60.63	1.59	20.53	1.25	305.47
Last 5	16:28:21	1500.00	22.58	5.18	58.99	1.54	20.55	1.18	296.70
Last 5	16:33:21	1799.99	22.36	5.17	58.57	1.68	20.55	1.27	287.75
Variance 0			-0.32	0.01	-0.88			-0.02	-9.66
Variance 1			-0.60	-0.01	-1.63			-0.07	-8.78
Variance 2			-0.22	-0.00	-0.43			0.09	-8.95

Notes

Sampled at 16:40, DUP-02 taken here at 17:15

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:56:49

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589976
Turbidity Make/Model LaMotte 2020 we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.96 ft
Screen Length 10 ft
Depth to Water 18.94 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.8 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	15:33:47	600.02	25.03	4.89	63.11	1.06	19.31	0.40	215.28
Last 5	15:38:47	900.01	25.00	4.88	64.18	0.63	19.34	0.39	211.35
Last 5	15:43:47	1200.01	24.76	4.89	63.91	0.51	19.34	0.38	208.10
Last 5	15:48:47	1500.01	24.43	4.88	64.04	1.23	19.33	0.39	205.58
Last 5	15:53:47	1800.00	24.22	4.88	63.89	0.87	19.34	0.37	204.05
Variance 0			-0.24	0.00	-0.27			-0.01	-3.25
Variance 1			-0.33	-0.00	0.13			0.01	-2.51
Variance 2			-0.21	0.00	-0.15			-0.02	-1.53

Notes

Sample 7/10/2018 1555

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-11 09:16:28

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 589976
Turbidity Make/Model LaMotte 2020 we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 17.65 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 31.68 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	08:54:02	900.02	21.65	7.10	2851.14	0.50	19.19	0.31	156.21
Last 5	08:59:02	1200.00	21.67	7.09	2833.63	0.38	19.52	0.28	144.59
Last 5	09:04:02	1500.00	21.80	7.09	2830.21	0.36	19.79	0.26	135.82
Last 5	09:09:02	1800.00	21.74	7.09	2820.15	0.34	20.04	0.23	128.93
Last 5	09:14:02	2099.99	21.70	7.09	2812.70	0.34	20.29	0.22	123.70
Variance 0			0.12	-0.00	-3.42			-0.02	-8.77
Variance 1			-0.06	-0.00	-10.05			-0.03	-6.89
Variance 2			-0.04	-0.00	-7.45			-0.01	-5.23

Notes

Sample at 7/11/2018 0917

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-10 15:27:47

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 588863
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 27 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.62 ft
Screen Length 10 ft
Depth to Water 20.04 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2105124 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 141.24 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	15:00:26	3599.95	24.06	5.07	42.98	2.28	26.50	3.93	287.00
Last 5	15:05:27	3900.95	23.65	5.12	43.37	2.46	27.15	4.13	281.70
Last 5	15:10:27	4200.94	23.48	5.12	42.92	2.70	28.50	3.94	275.40
Last 5	15:15:27	4500.93	23.29	5.13	0.35	1.46	29.67	3.92	269.60
Last 5	15:20:27	4800.93	24.01	5.13	1.52	1.22	31.81	3.98	269.40
Variance 0			-0.18	0.01	-0.46			-0.06	-0.20
Variance 1			0.72	0.25	-42.57			4.19	0.6
Variance 2			2.06	-0.09	1.18			0.44	.40

Notes

Pumped dry at 15:21, Sampled 7/11/18 at 08:45

Grab Samples

Water Level Measurement Data Sheet
Plant McIntosh
Georgia Power Company



Date: 10/8/2018

Gauged by: Peter Adams

Provided for reference

Area	Well ID	Total Depth (ft btoc)	Measured Depth to Water (ft btoc)	Measured Depth to Bottom (ft btoc)	July 2018 Depth to Water (ft btoc)	July 2018 Depth to Bottom (ft btoc)	Installed Depth to Top of Screen (ft btoc)	Notes
Landfill No. 3	GWA-1	32.96	13.79	33.00	12.03	32.92	22.96	
	GWA-1A	38.10	14.62	38.08	12.86	38.10	33.20	
	GWA-2	33.75	14.33	33.80	13.19	33.81	23.75	
	GWA-2A	43.20	18.92	43.25	17.75	43.24	28.04	
	GWA-2B	51.78	18.95	51.78	--	--	41.48	
	GWA-3A	33.88	15.26	33.91	13.74	33.88	23.88	
	GWA-3B	18.56	13.66	18.57	11.05	18.56	8.56	
	GWA-4	29.16	15.12	29.20	13.63	29.15	19.16	
	GWA-5	28.44	13.29	28.50	12.55	28.46	18.44	
	GWA-7	32.84	18.15	32.82	16.55	32.80	22.84	
	GWA-7A	46.94	22.19	47.05	--	--	36.64	
	GWC-1	32.53	19.50	32.55	18.10	32.55	22.53	
	GWC-2	37.34	18.43	37.36	17.25	37.35	27.34	
	GWC-3	36.69	21.81	36.73	20.60	36.70	26.69	
	GWC-4A	36.96	20.54	37.01	19.01	37.00	26.96	
	GWC-4B	14.74	DRY	14.71	DRY	14.71	9.74	
	GWC-5	30.56	19.11	30.53	17.66	30.54	20.56	
	GWC-6	32.64	21.40	32.68	20.04	32.62	22.64	
PZ-1	52.68	21.56	52.91	--	--	42.38		
PZ-2	42.26	21.10	42.09	--	--	31.96		
PZ-3	41.57	14.81	42.29	--	--	31.27		

Notes:

ft = feet

-- = Not Applicable

NM = Not Measured

btoc = below top of casing

Low-Flow

Date:	10/8/2018 13:20	Well ID:	GWA-1A
Operator Name:	L. Coker	Well diameter:	2 in
Pump Model/Type:	Alexis	Well Total Depth:	38.10 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	14.62 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	130 mL/min
Site Name:	LF3	Total System Volume:	0.2149758 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	5.52 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	4.1 L
Tubing Length:	35 ft	Pump placement from TOC:	2 ft
Sonde SN:	364455		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.07	5.19	130.60	55.00	1.25	22.89	0.44	14.80
600.02	5.19	121.80	55.40	1.08	22.24	1.43	14.90
900.02	5.19	116.90	55.40	0.99	22.01	0.33	14.95
1201.01	5.18	113.70	55.50	0.94	21.92	0.47	14.90
1501.00	5.19	111.10	55.30	0.89	21.67	0.34	15.00
1800.99	5.18	108.80	55.30	0.87	21.54	0.45	15.08

Low-Flow

Date:	10/8/2018 13:20	Well ID:	GWA-2A
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	43.25 ft
Company Name:	GEI	Screen Length:	10
Tubing Type:	LDPE	Depth to Water:	18.92 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	200 mL/min
Site Name:	LF3	Total System Volume:	0.2551467 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	4.44 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	6 L
Tubing Length:	37	Pump placement from TOC:	3 ft
Sonde SN:	601533		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
299.99	5.42	134.50	77.47	0.84	23.65	0.75	19.24
599.99	5.41	102.70	76.54	0.38	22.53	1.09	19.29
899.99	5.42	94.01	76.48	0.28	22.36	1.22	19.29
1199.99	5.42	92.90	76.15	0.36	22.40	0.70	19.29
1499.99	5.44	91.10	80.14	0.38	22.51	0.74	19.29
1799.99	5.45	88.90	80.54	0.36	22.54	0.61	19.29

Low-Flow

Date:	10/8/2018 15:02	Well ID:	GWA-2B
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	51.78 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	18.95 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	200 mL/min
Site Name:	LF3	Total System Volume:	0.3131711 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	7.32 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	10 L
Tubing Length:	50	Pump placement from TOC:	2 ft
Sonde SN:	601533		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.02	5.54	138.60	232.75	6.43	22.37	3.84	19.23
600.02	5.46	71.20	228.65	1.13	23.20	4.48	19.64
900.02	5.44	64.00	228.16	0.68	22.26	3.57	20.05
1200.02	5.39	49.50	226.45	0.51	21.85	2.65	20.34
1500.02	5.23	48.60	228.90	0.37	21.87	0.87	20.42
1800.02	5.25	50.30	226.71	0.29	21.77	0.69	20.50
2100.02	5.25	40.00	225.44	0.26	21.67	1.25	20.52
2400.02	5.27	33.90	226.36	0.23	21.48	1.14	20.55
2699.82	5.29	28.40	223.46	0.21	21.50	0.91	20.55
2999.82	5.29	27.90	225.20	0.19	21.48	0.91	20.56

Low-Flow

Date:	10/8/2018 16:30	Well ID:	GWA-3A
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	33.88 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	15.23 ft
Project Name:	LF3	Final Pumping Rate:	200 mL/min
Site Name:	McIntosh	Total System Volume:	0.2239027 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	49.32 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	12 L
Tubing Length:	30 ft	Pump placement from TOC:	2 ft
Sonde SN:	589976		
Turbidity Make/Model:	LaMotte 2020 we		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.00	4.89	76.20	67.90	0.86	21.54	4.69	16.25
600.00	4.86	73.50	70.01	0.60	21.01	6.16	16.95
900.00	4.86	73.10	69.63	0.51	20.97	9.29	17.52
1200.00	4.85	72.50	69.67	0.51	21.04	11.90	17.95
1500.00	4.86	72.10	68.80	0.51	21.24	13.70	18.29
1800.00	4.86	72.00	69.12	0.51	21.14	14.50	18.49
2100.00	4.86	71.80	68.85	0.51	21.11	12.50	18.67
2400.00	4.85	72.10	69.43	0.50	21.09	13.70	18.83
2700.00	4.85	72.20	69.61	0.49	21.06	12.70	18.94
3000.00	4.85	72.20	69.15	0.48	21.08	12.40	19.08
3300.00	4.84	72.20	69.04	0.47	21.07	11.10	19.20
3600.00	4.84	73.00	68.96	0.47	21.02	12.70	19.34

Low-Flow

Date:	10/8/2018 16:17	Well ID:	GWA-3B
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	18.56 ft
Company Name:	GEI	Screen Length:	10
Tubing Type:	LDPE	Depth to Water:	13.65 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	200 mL/min
Site Name:	LF3	Total System Volume:	0.1792685 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	19.44 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	6 L
Tubing Length:	20	Pump placement from TOC:	2 ft
Sonde SN:	601533		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.02	5.22	9.50	123.40	0.30	22.49	9.23	13.90
600.02	5.23	-1.00	122.56	0.28	22.35	5.19	14.15
900.02	5.21	-4.50	119.82	0.23	22.46	4.54	14.40
1200.02	5.18	-3.70	114.46	0.18	22.40	3.04	14.70
1500.02	5.15	-1.70	110.98	0.16	22.28	2.13	14.99
1800.02	5.10	2.70	110.02	0.14	22.26	3.09	15.27

Low-Flow

Date:	10/8/2018 15:50	Well ID:	GWA-4
Operator Name:	P. Adams	Well diameter:	2 in
Pump Model/Type:	Alexis Perisaltic	Well Total Depth:	29.20 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	15.12 ft
Project Name:	McIntosh	Final Pumping Rate:	150 mL/min
Site Name:	LF3	Total System Volume:	0.1971222 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	48.84 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	4.5 L
Tubing Length:	24 ft	Pump placement from TOC:	2.0 ft
Sonde SN:	474527		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.00	4.92	197.70	40.90	3.00	24.05	2.59	15.72
600.00	4.98	189.20	41.08	2.50	23.74	1.27	16.30
900.00	5.04	177.30	41.93	1.90	23.21	0.63	17.10
1200.00	4.86	174.40	41.88	2.20	23.35	1.11	17.91
1500.00	4.82	170.50	41.13	1.70	23.41	1.24	18.05
1800.00	4.76	168.00	40.92	2.10	23.09	0.46	18.19

Low-Flow

Date:	10/8/2018 16:55	Well ID:	GWA-5
Operator Name:	P. Adams	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	28.5 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	13.29 ft
Project Name:	LF3	Final Pumping Rate:	100 mL/min
Site Name:	McIntosh	Total System Volume:	0.2105124 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	31.92 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	4.5 L
Tubing Length:	27 ft	Pump placement from TOC:	2 ft
Sonde SN:	474527		
Turbidity Make/Model:	LaMotte 2020 we		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.00	4.61	167.10	109.47	0.53	23.28	7.18	14.90
600.00	4.58	162.70	108.78	0.37	23.17	6.63	15.30
900.00	4.54	160.90	108.05	0.42	23.19	5.15	15.55
1200.00	4.53	159.70	106.75	0.40	23.10	4.90	15.79
1500.00	4.52	159.10	106.23	0.41	23.06	4.77	15.89
1800.00	4.51	158.00	105.97	0.38	23.00	4.28	15.95

Low-Flow

Date:	10/8/2018 15:10	Well ID:	GWA-7
Operator Name:	L. Coker	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	32.80 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	18.15 ft
Project Name:	McIntosh	Final Pumping Rate:	120 mL/min
Site Name:	McIntosh	Total System Volume:	0.2105124 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	2.88 in
Tubing Diameter:	0.17in	Total Volume Pumped:	7.2 L
Tubing Length:	27 ft	Pump placement from TOC:	2 ft
Sonde SN:	464250		
Turbidity Make/Model:	LaMotte 2020 we		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.04	5.25	122.40	36.90	0.96	23.96	2.49	18.30
600.02	5.27	107.30	34.50	0.33	23.03	3.60	18.30
900.02	5.28	101.70	33.80	0.24	22.46	3.10	18.31
1200.01	5.28	99.00	33.50	0.22	22.39	3.25	18.34
1500.01	5.27	97.50	34.10	0.21	22.30	5.20	18.35
1799.98	5.28	96.20	37.20	0.21	22.25	20.51	18.35
2099.99	5.26	95.90	40.60	0.22	22.20	41.00	18.41
2399.98	5.26	107.10	42.90	0.83	22.16	49.00	18.35
2699.97	5.25	96.10	43.00	0.70	22.33	49.00	18.38
2999.97	5.25	94.60	43.10	0.57	22.45	52.00	18.35
3299.96	5.25	93.60	42.80	0.44	22.40	54.00	18.39
3599.95	5.25	93.20	43.00	0.40	22.57	56.10	18.38

Low-Flow

Date:	10/8/2018 16:20	Well ID:	GWA-7A
Operator Name:	L. Coker	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	46.94 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	22.25 ft
Project Name:	McIntosh	Final Pumping Rate:	103 mL/min
Site Name:	LF3	Total System Volume:	0.2105124 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	9.96 in
Tubing Diameter:	.17in	Total Volume Pumped:	3.1L
Tubing Length:	41 ft	Pump placement from TOC:	2 ft
Sonde SN:	464250		
Turbidity Make/Model:	LaMotte2020we		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.04	5.51	61.80	0.00	7.91	26.57	16.30	22.30
600.02	5.81	-19.00	243.20	1.73	23.83	5.07	22.70
900.02	5.80	-17.20	245.00	0.47	22.62	3.05	22.80
1200.01	5.80	-17.90	243.60	0.32	22.54	2.78	22.90
1500.01	5.78	-18.00	240.10	0.26	22.44	2.58	23.00
1799.98	5.79	-18.40	237.80	0.21	22.26	1.34	23.08

Low-Flow

Date:	10/9/2018 10:34	Well ID:	GWC-1
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	36.69 ft
Company Name:	GEI	Screen Length:	10
Tubing Type:	LDPE	Depth to Water:	19.44 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	200 mL/min
Site Name:	LF3	Total System Volume:	0.2328295 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	1.2 in
Tubing Diameter:	0.17 in	Total Volume Pumped:	6 L
Tubing Length:	32	Pump placement from TOC:	2 ft
Sonde SN:	601533		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
299.84	5.13	91.00	37.24	2.04	21.73	1.07	19.55
599.84	5.12	89.50	37.25	1.82	21.42	0.34	19.55
899.83	5.12	89.60	37.13	1.71	21.37	0.42	19.55
1199.83	5.11	89.80	36.90	1.48	21.30	0.60	19.55
1499.83	5.11	89.80	36.22	1.47	21.41	0.48	19.55
1799.83	5.10	90.10	36.23	1.47	21.48	0.83	19.55

Low-Flow

Date:	10/9/2018 9:00	Well ID:	GWC-2
Operator Name:	L. Coker	Well diameter:	2 in
Pump Model/Type:	Alexis Perisaltic	Well Total Depth:	37.34 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	18.82 ft
Project Name:	McIntosh	Final Pumping Rate:	126 mL/min
Site Name:	McIntosh	Total System Volume:	0.1881953 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	1.8 in
Tubing Diameter:	.170in	Total Volume Pumped:	3.8 L
Tubing Length:	32 ft	Pump placement from TOC:	2.0 ft
Sonde SN:	464250		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.02	5.09	123.10	51.50	2.35	22.67	0.63	18.87
600.02	5.09	110.50	52.00	1.93	22.05	1.63	18.89
900.02	5.10	105.10	52.70	1.78	21.90	1.72	18.94
1200.02	5.07	103.70	51.70	1.86	21.84	0.70	18.95
1500.26	5.05	102.90	51.30	1.96	21.81	0.87	19.98
1800.25	5.04	102.30	50.90	1.99	21.81	1.34	18.97

Low-Flow

Date:	10/9/2018 8:50	Well ID:	GWC-3
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	36.69 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	21.77 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	200 mL/min
Site Name:	LF3	Total System Volume:	0.2462198 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	2.04 in
Tubing Diameter:	.175in	Total Volume Pumped:	6 L
Tubing Length:	35	Pump placement from TOC:	2 ft
Sonde SN:	601533		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.02	5.26	110.90	59.85	1.39	21.66	0.89	21.94
600.02	5.24	89.50	59.81	1.17	20.66	0.67	21.94
900.02	5.22	86.60	58.40	1.12	20.55	0.54	21.94
1200.02	5.23	85.00	59.48	1.06	20.48	0.46	21.94
1500.02	5.23	84.30	59.17	1.07	20.51	0.54	21.94
1800.02	5.23	84.50	59.18	1.04	20.52	0.58	21.94

Low-Flow

Date:	10/9/2018 0:00	Well ID:	GWC-4A
Operator Name:	L. Coker	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	36.96 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	20.80 ft
Project Name:	LF3	Final Pumping Rate:	140 mL/min
Site Name:	McIntosh	Total System Volume:	0.2462198 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	2.88in
Tubing Diameter:	0.17 in	Total Volume Pumped:	4 L
Tubing Length:	32 ft	Pump placement from TOC:	2 ft
Sonde SN:	464250		
Turbidity Make/Model:	LaMotte 2020 we		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.04	4.88	123.20	64.60	0.45	23.45	1.90	20.95
600.02	4.87	114.70	64.60	0.35	23.29	2.13	21.00
900.01	4.86	110.00	64.30	0.42	23.29	0.89	21.00
1200.01	4.85	106.20	63.00	0.48	23.24	1.15	21.01
1500.01	4.84	101.50	62.30	0.45	23.20	1.97	21.02
1800.00	4.85	98.80	62.80	0.30	23.45	3.07	21.04

Low-Flow

Date:	10/9/2018 12:07	Well ID:	GWC-5
Operator Name:	J. Adcock	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	30.56 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	19.1 ft
Project Name:	Plant McIntosh	Final Pumping Rate:	180 mL/min
Site Name:	LF3	Total System Volume:	0.2239027 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	28.8
Tubing Diameter:	.175in	Total Volume Pumped:	6.7 L
Tubing Length:	30 ft	Pump placement from TOC:	2 ft
Sonde SN:	601533		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.02	6.66	67.50	1758.49	0.70	22.76	0.51	20.36
600.02	6.66	62.40	1757.47	0.38	22.35	0.36	21.04
900.02	6.65	61.30	1709.60	0.24	22.47	0.38	21.49
1200.02	6.68	60.40	1793.62	0.24	22.55	0.40	21.85
1500.02	6.69	61.60	1871.39	0.28	22.83	0.57	21.14
1800.02	6.68	61.40	1846.39	0.28	22.80	0.81	21.35
2100.02	6.68	61.20	1827.36	0.28	22.80	0.53	21.50

Low-Flow

Date:	10/9/2018 8:50	Well ID:	GWC-6
Operator Name:	P. Adams	Well diameter:	2 in
Pump Model/Type:	Alexis Peristaltic	Well Total Depth:	32.68 ft
Company Name:	GEI	Screen Length:	10 ft
Tubing Type:	LDPE	Depth to Water:	21.4 ft
Project Name:	McIntosh	Final Pumping Rate:	100 mL/min
Site Name:	LF3	Total System Volume:	0.2105124 L
Latitude:	0° 0' 0"	Calculated Sample Rate:	300 sec
Longitude:	0° 0' 0"	Stabilization Drawdown:	31.44 in
Tubing Diameter:	.17in	Total Volume Pumped:	3 L
Tubing Length:	27 ft	Pump placement from TOC:	2 ft
Sonde SN:	588863		
Turbidity Make/Model:	LaMotte 2020 We		

Time	pH	ORP	Conductivity	DO	Temperature	Turbidity	DTW
300.00	4.89	165.30	60.17	2.43	22.41	1.11	22.10
600.00	4.96	146.20	44.10	1.35	22.10	1.52	22.50
900.00	4.94	139.40	46.39	1.53	21.98	1.28	23.02
1200.00	4.94	134.00	43.65	1.71	22.02	0.85	23.41
1500.00	4.94	131.10	45.17	1.67	22.17	1.04	23.78
1800.00	4.93	129.70	44.29	1.61	21.97	0.97	24.02

Water Level Measurement Data Sheet

Plant McIntosh

Georgia Power Company

Date: 1/28/2019



Gauged by: P. Adams, J. Noles, L. Coker

Provided for reference

Area	Well ID	Installed Total Depth (ft btoc)	Measured Depth to Water (ft btoc)	Measured Depth to Bottom (ft btoc)	July 2018 Depth to Water (ft btoc)	July 2018 Depth to Bottom (ft btoc)	Installed Depth to Top of Screen (ft btoc)	Notes
Landfill No. 3	GWA-1	36.00	8.74	32.98	12.03	32.92	25.45	
	GWA-1A	37.30	9.90	38.19	12.86	38.10	27.87	
	GWA-2	33.00	10.44	33.52	13.19	33.81	27.32	
	GWA-2A	43.18	15.49	43.26	17.75	43.24	33.00	
	GWA-2B	51.78	15.43	52.51	--	--	41.48	
	GWA-3A	33.88	10.81	33.92	13.74	33.88	22.60	
	GWA-3B	18.56	6.43	18.62	11.05	18.56	7.34	
	GWA-4	29.16	10.42	29.19	13.63	29.15	23.66	
	GWA-5	33.00	8.63	28.49	12.55	28.46	22.62	
	GWA-7	32.77	14.06	32.89	16.55	32.80	22.27	
	GWA-7A	46.94	15.86	47.42	--	--	36.64	
	GWC-1	35.96	15.36	32.60	18.10	32.55	26.50	
	GWC-2	36.78	13.35	37.35	17.25	37.35	27.25	
	GWC-3	35.51	18.59	36.74	20.60	36.70	26.30	
	GWC-4A	36.96	15.58	36.98	19.01	37.00	25.52	
	GWC-4B	18.00	DRY	14.75	DRY	14.71	7.70	
	GWC-5	30.56	15.03	30.60	17.66	30.54	20.96	
	GWC-6	32.64	17.81	32.71	20.04	32.62	26.67	
	PZ-1	52.68	18.02	52.90	--	--	42.38	
PZ-2	42.26	16.98	42.71	--	--	31.96		
PZ-3	41.57	9.87	42.29	--	--	32.27		

Notes: ft = feet NM = Not Measured btoc = below top of casing bgs = below ground surface

Product Name: Low-Flow System

Date: 2019-01-30 13:03:02

Project Information:

Operator Name L Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model Lamotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 37.3 ft
Screen Length 10 ft
Depth to Water 10.00 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 7.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:40:46	2100.02	16.37	5.25	72.72	6.12	10.15	1.08	171.04
Last 5	12:45:46	2400.02	16.52	5.20	67.85	6.30	10.15	1.00	183.03
Last 5	12:50:46	2700.02	16.43	5.18	65.69	5.48	10.16	0.96	238.02
Last 5	12:55:46	3000.02	16.61	5.17	64.85	4.30	10.17	0.97	332.31
Last 5	13:00:46	3300.02	16.84	5.14	57.84	--	--	0.90	370.87
Variance 0			-0.09	-0.02	-2.16			-0.04	54.99
Variance 1			0.19	-0.01	-0.84			0.01	94.29
Variance 2			0.22	-0.03	-7.01			-0.07	38.56

Notes

Sampled at 13:05. Delete last reading forgot to finish low flow

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:11:23

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 43 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.26 ft
Screen Length 10 ft
Depth to Water 15.45 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.68 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10%	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 10
Stabilization									
Last 5	12:41:47	600.02	15.08	5.39	80.34	0.58	15.69	0.54	72.22
Last 5	12:46:47	900.02	15.41	5.39	80.04	0.58	15.69	0.48	71.50
Last 5	12:51:47	1200.02	15.41	5.40	79.85	0.57	15.69	0.44	70.00
Last 5	12:56:47	1500.21	15.42	5.41	80.58	0.98	15.69	0.44	69.01
Last 5	13:01:47	1800.21	15.43	5.42	79.81	1.30	15.69	0.39	66.92
Variance 0			0.00	0.01	-0.20			-0.04	-1.50
Variance 1			0.01	0.00	0.73			-0.01	-1.00
Variance 2			0.01	0.01	-0.77			-0.05	-2.09

Notes

Sampled at 1320 on 1-30-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:40:05

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 52 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-2B
Well diameter 2 in
Well Total Depth 52.51 ft
Screen Length 10 ft
Depth to Water 15.25 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.322098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 21.96 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10%	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 10
Stabilization									
Last 5	14:17:40	1799.82	15.44	5.25	221.83	4.84	17.11	0.19	47.36
Last 5	14:22:40	2099.82	15.48	5.60	216.31	3.57	17.08	0.19	25.21
Last 5	14:27:40	2399.82	15.43	5.15	220.27	2.94	17.08	0.18	55.15
Last 5	14:32:40	2699.82	15.52	5.11	220.92	3.09	17.08	0.17	53.61
Last 5	14:37:40	2999.82	15.41	5.08	220.82	2.59	17.08	0.17	54.19
Variance 0			-0.04	-0.45	3.97			-0.01	29.94
Variance 1			0.08	-0.03	0.65			-0.01	-1.54
Variance 2			-0.10	-0.03	-0.10			-0.00	0.58

Notes

Sampled at 1442 on 1-30-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:02:00

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
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 3 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 10.77 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.72 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			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	12:39:00	600.03	16.00	4.95	80.31	1.59	12.30	5.67	85.51
Last 5	12:44:00	900.52	16.20	4.95	79.70	1.41	12.66	5.56	78.82
Last 5	12:49:00	1200.52	16.45	4.95	79.62	1.71	12.98	5.53	76.82
Last 5	12:54:00	1500.52	16.45	4.92	80.26	1.75	13.15	5.19	75.19
Last 5	12:59:00	1800.52	16.23	4.88	81.01	2.87	13.33	4.95	74.04
Variance 0			0.26	-0.00	-0.08			-0.03	-2.00
Variance 1			0.00	-0.03	0.64			-0.34	-1.63
Variance 2			-0.23	-0.04	0.75			-0.24	-1.15

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:49:37

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 20 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 6.54 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	14:27:43	4200.23	15.57	5.16	56.74	6.88	7.49	8.98	62.31
Last 5	14:32:43	4500.23	15.64	5.15	57.04	6.79	7.50	8.88	62.47
Last 5	14:37:43	4800.23	15.73	5.14	57.43	6.72	7.51	8.78	62.37
Last 5	14:42:43	5100.23	15.73	5.13	58.08	6.81	7.52	8.71	64.85
Last 5	14:47:43	5400.23	15.82	5.13	58.21	6.68	7.53	8.59	62.44
Variance 0			0.09	-0.01	0.39			-0.10	-0.10
Variance 1			-0.00	-0.01	0.65			-0.07	2.48
Variance 2			0.09	-0.00	0.13			-0.12	-2.41

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 16:03:07

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 5 ft
Depth to Water 10.39 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 51.96 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	15:41:25	900.02	15.77	4.94	50.59	0.90	13.25	5.93	62.56
Last 5	15:46:25	1200.02	15.65	4.96	49.94	0.98	13.90	5.86	59.26
Last 5	15:51:25	1500.02	15.15	4.96	49.62	1.53	14.20	5.83	57.34
Last 5	15:56:25	1799.94	15.03	4.96	49.43	1.62	14.50	5.79	56.75
Last 5	16:01:25	2099.95	14.66	4.94	50.24	1.84	14.72	5.80	56.20
Variance 0			-0.50	-0.01	-0.32			-0.03	-1.92
Variance 1			-0.12	0.00	-0.19			-0.05	-0.59
Variance 2			-0.37	-0.01	0.81			0.01	-0.55

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 16:50:42

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.49 ft
Screen Length 10 ft
Depth to Water 8.60 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 45.24 in
Total Volume Pumped 6.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10%	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 10
Stabilization									
Last 5	16:24:39	2700.07	15.82	4.71	72.93	5.15	11.74	3.70	97.21
Last 5	16:29:39	3000.07	16.02	4.71	73.10	5.52	11.91	3.69	97.80
Last 5	16:34:39	3300.07	15.93	4.71	72.79	5.30	12.17	3.63	97.28
Last 5	16:39:39	3600.07	15.77	4.72	72.29	5.70	12.25	3.65	96.87
Last 5	16:44:39	3899.88	15.22	4.72	72.94	4.71	12.27	3.69	95.25
Variance 0			-0.09	0.00	-0.32			-0.05	-0.51
Variance 1			-0.16	0.01	-0.49			0.02	-0.41
Variance 2			-0.55	-0.00	0.65			0.04	-1.63

Notes

Sampled at 1655 on 1-30-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:53:24

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.89 ft
Screen Length 10 ft
Depth to Water 14.06 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2685369 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:31:49	1200.38	15.40	4.98	33.37	6.22	14.22	1.50	75.04
Last 5	13:36:49	1500.38	15.57	4.95	33.52	5.50	14.22	1.46	75.46
Last 5	13:41:49	1800.38	15.61	4.97	33.84	5.33	14.22	1.41	73.11
Last 5	13:46:49	2100.38	15.46	4.97	36.23	5.16	14.22	1.26	72.13
Last 5	13:51:49	2400.38	15.38	4.96	40.75	4.96	14.22	1.02	71.90
Variance 0			0.05	0.02	0.32			-0.06	-2.35
Variance 1			-0.15	-0.00	2.39			-0.14	-0.98
Variance 2			-0.08	-0.01	4.52			-0.24	-0.23

Notes

Sampled at 1401

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:01:51

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
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 3 ft

Well Information:

Well ID GWA-7A
Well diameter 2 in
Well Total Depth 47 ft
Screen Length 10 ft
Depth to Water 15.8 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:40:09	1200.02	15.66	5.56	225.03	2.68	19.40	0.54	-26.13
Last 5	12:45:09	1500.02	15.43	5.37	242.82	2.72	19.40	0.54	9.42
Last 5	12:50:09	1800.02	15.56	5.23	249.01	2.51	19.40	0.55	23.59
Last 5	12:55:09	2100.02	15.42	5.16	251.83	2.66	19.40	0.58	30.16
Last 5	13:00:09	2400.02	15.57	5.15	252.14	2.43	19.40	0.58	30.75
Variance 0			0.13	-0.14	6.19			0.02	14.17
Variance 1			-0.14	-0.06	2.82			0.02	6.57
Variance 2			0.15	-0.01	0.31			0.00	0.59

Notes

Sampled at 1304

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:48:10

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
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 3 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.6 ft
Screen Length 5 ft
Depth to Water 15.36 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:25:12	600.02	17.41	4.81	38.31	1.11	15.50	1.78	90.32
Last 5	14:30:12	900.02	17.45	4.81	38.02	1.25	15.50	1.56	86.91
Last 5	14:35:12	1200.02	17.50	4.82	37.76	0.97	15.50	1.50	84.39
Last 5	14:40:12	1500.02	17.63	4.80	37.52	1.43	15.50	1.51	83.46
Last 5	14:45:15	1802.74	17.67	4.81	37.26	1.19	15.50	1.40	81.51
Variance 0			0.04	0.01	-0.26			-0.06	-2.52
Variance 1			0.14	-0.02	-0.24			0.02	-0.94
Variance 2			0.04	0.01	-0.26			-0.12	-1.94

Notes

Sampled at 1451

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-31 09:59:51

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.35 ft
Screen Length 10 ft
Depth to Water 13.45 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10%	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10
Last 5	09:37:23	900.02	16.43	5.54	75.19	1.27	13.50	3.52	101.91
Last 5	09:42:23	1200.02	16.29	5.45	69.44	0.72	13.50	3.30	102.93
Last 5	09:47:23	1500.02	16.06	5.40	66.41	1.42	13.50	3.10	102.03
Last 5	09:52:23	1800.02	16.24	5.39	65.57	1.29	13.50	3.09	99.91
Last 5	09:57:23	2100.02	16.78	5.38	65.04	0.84	13.50	3.04	99.85
Variance 0			-0.23	-0.06	-3.03			-0.20	-0.90
Variance 1			0.18	-0.01	-0.84			-0.01	-2.11
Variance 2			0.54	-0.02	-0.53			-0.05	-0.06

Notes

Sampled at. 1005 on 1-31-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 15:35:04

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model Lamotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 31 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.74 ft
Screen Length 10 ft
Depth to Water 18.51 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 4.3 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:07:46	600.02	17.39	4.90	56.26	0.75	18.82	0.99	390.90
Last 5	15:12:46	900.02	17.39	4.92	56.70	1.76	18.81	0.94	362.75
Last 5	15:17:46	1200.02	17.62	4.91	57.23	1.05	18.81	0.92	343.90
Last 5	15:22:46	1500.02	17.61	4.91	56.91	0.87	18.81	0.90	331.41
Last 5	15:27:46	1800.02	17.82	4.91	56.59	1.17	18.81	0.90	321.41
Variance 0			0.23	-0.00	0.53			-0.02	-18.85
Variance 1			-0.01	-0.00	-0.32			-0.02	-12.49
Variance 2			0.21	0.00	-0.32			-0.00	-10.00

Notes

Sampled at 1530

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 16:11:54

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
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 3 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.98 ft
Screen Length 10 ft
Depth to Water 15.58 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:49:45	1200.02	18.30	4.51	56.49	1.12	16.08	1.70	164.25
Last 5	15:54:45	1500.02	18.42	4.52	56.26	1.01	16.08	1.50	148.42
Last 5	15:59:45	1800.02	18.33	4.52	56.26	0.92	16.08	1.33	137.81
Last 5	16:04:45	2100.02	18.56	4.53	56.15	1.22	16.08	1.18	127.26
Last 5	16:09:46	2401.02	18.45	4.52	56.10	1.30	16.09	1.09	119.02
Variance 0			-0.09	-0.00	-0.00			-0.17	-10.62
Variance 1			0.23	0.01	-0.11			-0.15	-10.55
Variance 2			-0.11	-0.01	-0.05			-0.09	-8.24

Notes

Sampled at 1623

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-31 09:56:17

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.56 ft
Screen Length 10 ft
Depth to Water 15.09 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 37.44 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	+/- 10%
Last 5	09:28:54	600.18	13.58	5.66	699.56	0.19	16.57	0.76	40.89
Last 5	09:33:54	900.17	14.04	5.68	687.33	0.40	17.09	0.57	35.29
Last 5	09:38:54	1200.17	13.97	5.69	684.45	0.25	17.42	0.55	33.11
Last 5	09:43:54	1500.18	13.71	5.69	686.41	0.91	17.70	0.57	30.99
Last 5	09:48:54	1800.17	13.81	5.69	688.21	0.58	18.00	0.57	29.86
Variance 0			-0.07	0.01	-2.88			-0.02	-2.17
Variance 1			-0.27	0.00	1.97			0.02	-2.13
Variance 2			0.10	0.00	1.79			-0.00	-1.13

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:31:29

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model Lamotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.71 ft
Screen Length 10 ft
Depth to Water 17.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 168 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:07:55	2100.02	18.55	5.00	41.29	1.22	28.15	5.79	395.12
Last 5	14:12:55	2400.02	18.53	4.97	41.77	1.20	29.05	5.64	395.53
Last 5	14:17:55	2700.02	18.60	4.82	42.89	1.06	30.00	3.84	386.21
Last 5	14:22:55	3000.02	18.61	4.74	45.38	2.10	30.65	3.12	374.19
Last 5	14:27:55	3300.02	18.60	4.52	19.97	2.30	31.91	2.86	374.10
Variance 0			0.07	-0.15	1.11			-1.80	-9.31
Variance 1			0.01	-0.08	2.49			-0.72	-12.02
Variance 2			-0.01	-0.22	-25.40			-0.26	-0.09

Notes

Purged dry at 14:27

Grab Samples

Water Level Measurement Data Sheet

Plant McIntosh

Georgia Power Company

Date: 25-Mar-19



Gauged by: J. Adcock, L. Coker, J. Noles

Provided for reference

Area	Well ID	Installed Total Depth (ft btoc)	Measured Depth to Water (ft btoc)	Measured Depth to Bottom (ft btoc)	January 2019 Depth to Water (ft btoc)	January 2019 Depth to Bottom (ft btoc)	Installed Depth to Top of Screen (ft btoc)	Notes
Landfill No. 3	GWA-1	36.00	9.46	32.96	8.74	32.98	25.45	
	GWA-1A	37.30	10.45	38.19	9.90	38.19	27.87	
	GWA-2	33.00	10.57	33.77	10.44	33.52	27.32	
	GWA-2A	43.18	15.78	43.24	15.49	43.26	33.00	
	GWA-2B	51.78	15.73	52.50	15.43	52.51	41.48	
	GWA-3A	33.88	11.19	33.88	10.81	33.92	22.60	
	GWA-3B	18.56	7.11	18.62	6.43	18.62	7.34	
	GWA-4	29.16	11.05	28.90	10.42	29.19	23.66	
	GWA-5	33.00	9.69	28.46	8.63	28.49	22.62	
	GWA-7	32.77	14.39	33.00	14.06	32.89	22.27	
	GWA-7A	46.94	19.07	47.41	15.86	47.42	36.64	
	GWC-1	35.96	15.77	32.24	15.36	32.60	26.50	
	GWC-2	36.78	14.81	37.33	13.35	37.35	27.25	
	GWC-3	35.51	18.65	36.74	18.59	36.74	26.30	
	GWC-4A	36.96	16.62	36.98	15.58	36.98	25.52	
	GWC-4B	18.00	DRY	14.60	DRY	14.75	7.70	
	GWC-5	30.56	16.16	30.60	15.03	30.60	20.96	
	GWC-6	32.64	17.88	32.65	17.81	32.71	26.67	
	PZ-1	52.68	18.26	52.97	18.02	52.90	42.38	
PZ-2	42.26	17.46	42.72	16.98	42.71	31.96		
PZ-3	41.57	10.01	42.23	9.87	42.29	32.27		

Notes: ft = feet

NM = Not Measured

btoc = below top of casing

bgs = below ground surface

Product Name: Low-Flow System

Date: 2019-03-06 21:02:22

Project Information:

Operator Name J.Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 36 ft

Pump placement from TOC ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 38.19 ft
Screen Length 10 ft
Depth to Water 10.60 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 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			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	20:39:30	600.02	18.81	5.06	51.42	2.31	10.65	1.09	158.29
Last 5	20:44:30	900.02	18.77	5.07	51.39	0.93	10.65	1.12	149.75
Last 5	20:49:30	1200.02	18.51	5.07	51.51	0.79	10.65	1.13	144.81
Last 5	20:54:30	1500.02	18.58	5.08	51.37	0.74	10.65	1.06	143.35
Last 5	20:59:30	1800.02	18.69	5.09	51.61	0.60	10.65	1.02	138.98
Variance 0			-0.26	0.01	0.12			0.01	-4.94
Variance 1			0.07	0.01	-0.15			-0.07	-1.45
Variance 2			0.11	0.01	0.24			-0.04	-4.37

Notes

Sampled at 1630

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 15:39:21

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 408206
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 38 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.24 ft
Screen Length 10 ft
Depth to Water 15.78 ft

Pumping Information:

Final Pumping Rate 160 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.4 in
Total Volume Pumped 4.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	20:39:30	900.02	18.96	5.54	75.40	0.84	16.18	0.86	111.00
Last 5	20:44:30	1200.02	18.81	5.50	74.30	0.72	16.20	0.63	108.90
Last 5	20:49:30	1500.02	18.76	5.47	74.00	0.98	16.21	0.55	109.50
Last 5	20:54:30	1800.02	18.75	5.45	74.90	1.20	16.21	0.51	109.90
Last 5	20:59:30	2100.02	18.86	5.43	74.70	1.16	16.23	0.49	104.70
Variance 0			-0.26	0.01	0.12			0.01	-4.94
Variance 1			0.07	0.01	-0.15			-0.07	-1.45
Variance 2			0.11	0.01	0.24			-0.04	-4.37

Notes

Sampled at 1620

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 08:55:03

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 408206
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 46 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-2B
Well diameter 2 in
Well Total Depth 52.50 ft
Screen Length 10 ft
Depth to Water 15.73 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 21.24 in
Total Volume Pumped 9.0 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	09:40:30	2700.02	16.69	5.34	201.50	2.87	17.50	0.15	111.70
Last 5	09:45:30	3000.02	16.87	5.14	209.40	2.04	17.51	0.15	134.60
Last 5	09:50:30	3300.02	16.60	5.00	207.90	1.73	17.51	0.15	134.60
Last 5	09:55:30	3600.02	16.81	4.95	210.90	0.94	17.50	0.15	134.80
Last 5	10:00:30	3900.02	16.96	4.93	211.40	0.88	17.50	0.15	132.00
Variance 0			-0.26	0.01	0.12			0.01	-4.94
Variance 1			0.07	0.01	-0.15			0.00	-1.45
Variance 2			0.11	0.01	0.24			0.00	-4.37

Notes

Sampled at 1620

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 12:54:47

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 598939
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 11.43 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.24 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:31:09	4274.02	18.98	4.81	73.22	6.31	13.76	2.60	146.97
Last 5	12:36:09	4574.02	19.10	4.78	74.15	6.17	13.82	2.41	148.35
Last 5	12:42:20	4945.02	19.20	4.79	74.06	6.14	13.86	2.06	173.22
Last 5	12:47:30	5255.02	19.24	4.80	73.61	5.72	13.92	2.22	147.92
Last 5	12:52:30	5555.01	19.37	4.80	73.95	5.71	13.95	2.17	151.19
Variance 0			0.10	0.01	-0.09			-0.35	24.87
Variance 1			0.04	0.02	-0.46			0.16	-25.29
Variance 2			0.13	-0.00	0.35			-0.06	3.27

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 11:02:47

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 598939
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 15 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 7.27 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1569514 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.48 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:36:14	300.03	15.98	5.19	62.25	3.91	7.48	5.85	157.57
Last 5	10:46:14	900.02	16.52	5.21	62.01	3.58	7.65	5.75	155.10
Last 5	10:51:14	1200.01	16.56	5.21	62.08	3.60	7.72	5.70	148.53
Last 5	10:56:14	1500.01	16.65	5.22	62.15	3.46	7.78	5.67	148.45
Last 5	11:01:14	1800.02	16.65	5.22	62.23	3.49	7.81	5.63	150.14
Variance 0			0.04	-0.00	0.07			-0.05	-6.56
Variance 1			0.09	0.01	0.07			-0.04	-0.09
Variance 2			0.00	0.00	0.08			-0.04	1.69

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 09:52:57

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 598939
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 28 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 5 ft
Depth to Water 11.33 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 46.56 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	09:31:21	900.02	16.47	4.94	41.07	1.08	14.07	6.38	180.84
Last 5	09:36:21	1200.02	16.38	4.96	41.20	1.35	14.62	6.40	185.31
Last 5	09:41:21	1500.00	16.02	5.00	41.11	1.11	14.86	6.36	184.02
Last 5	09:46:21	1800.02	15.81	4.98	41.17	1.13	15.07	6.35	177.84
Last 5	09:51:21	2100.02	15.80	4.99	41.28	1.48	15.21	6.39	175.10
Variance 0			-0.36	0.04	-0.09			-0.04	-1.29
Variance 1			-0.22	-0.01	0.06			-0.01	-6.18
Variance 2			-0.01	0.01	0.11			0.05	-2.74

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 16:46:01

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 598939
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 33.00 ft
Screen Length 33.00 ft
Depth to Water 9.89 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 43.8 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	16:18:06	1573.01	18.52	4.55	89.58	8.74	12.49	0.68	161.47
Last 5	16:23:06	1873.01	18.39	4.58	90.03	7.53	12.68	0.65	161.78
Last 5	16:28:06	2173.01	18.46	4.59	89.95	6.55	12.95	0.65	154.51
Last 5	16:33:06	2473.01	18.43	4.57	89.30	7.95	13.18	0.76	174.19
Last 5	16:43:06	3073.01	18.51	4.56	89.48	4.98	13.54	0.67	159.63
Variance 0			0.08	0.01	-0.08			0.01	-7.27
Variance 1			-0.03	-0.02	-0.65			0.10	19.68
Variance 2			0.08	-0.01	0.17			-0.09	-14.56

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 10:30:10

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 408206
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 33.00 ft
Screen Length 10 ft
Depth to Water 14.39 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.88 in
Total Volume Pumped 9.0 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	11:40:30	4200.02	18.59	5.12	37.70	28.3	14.87	0.66	133.20
Last 5	11:45:30	4500.02	18.00	5.15	37.70	27.2	14.88	0.65	134.00
Last 5	11:50:30	4800.02	18.88	5.14	38.00	25.5	14.88	0.60	133.30
Last 5	11:55:30	5100.02	18.81	5.14	37.40	21.2	14.88	0.63	133.20
Last 5	12:00:30	5400.02	18.88	5.15	38.30	21.6	14.88	0.62	132.80
Variance 0			-0.26	0.01	0.12			0.01	-4.94
Variance 1			0.07	0.01	-0.15			0.00	-1.45
Variance 2			0.11	0.01	0.24			0.00	-4.37

Notes

GWA-7-Filtered at 1205, GWA-7 at 1210

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 12:40:10

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 408206
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWA-7A
Well diameter 2 in
Well Total Depth 47.41 ft
Screen Length 10 ft
Depth to Water 19.07 ft

Pumping Information:

Final Pumping Rate 115 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.88 in
Total Volume Pumped 4.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	12:55:30	1200.12	20.39	5.80	195.50	3.16	20.01	0.33	-26.60
Last 5	13:00:30	1200.12	20.26	5.75	197.40	3.20	20.03	0.25	-14.90
Last 5	13:05:30	1500.02	20.29	5.67	203.30	4.88	20.05	0.20	-2.70
Last 5	13:10:30	1800.12	20.36	5.63	205.50	3.56	20.05	0.16	1.90
Last 5	13:15:30	2100.12	20.52	5.62	205.20	1.48	20.06	0.15	4.50
Variance 0			-0.15	0.01	0.12			0.14	-4.94
Variance 1			0.03	0.01	-0.15			0.00	-1.45
Variance 2			0.10	0.01	0.24			0.00	-4.37

Notes

Sampled at 1320

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-07 15:59:34

Project Information:

Operator Name J.Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 32 ft

Pump placement from TOC ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.24 ft
Screen Length 5 ft
Depth to Water 16.20 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 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			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	15:37:59	600.02	17.71	5.01	38.16	1.66	16.25	1.40	163.01
Last 5	15:42:59	900.02	17.80	5.00	38.05	1.25	16.25	1.33	159.20
Last 5	15:47:59	1200.02	17.84	4.99	37.99	1.19	16.25	1.30	155.69
Last 5	15:52:59	1500.02	17.79	4.99	37.88	1.51	16.25	1.29	153.26
Last 5	15:57:59	1800.02	17.89	4.99	37.87	1.89	16.25	1.29	152.64
Variance 0			0.04	-0.00	-0.06			-0.02	-3.52
Variance 1			-0.06	-0.01	-0.11			-0.01	-2.43
Variance 2			0.10	-0.00	-0.02			-0.01	-0.61

Notes

Sampled at 1110

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 14:19:28

Project Information:

Operator Name J. Adcock
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 598939
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 2 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.35 ft
Screen Length 10 ft
Depth to Water 15.16 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 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			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:58:03	900.03	21.34	5.52	69.38	1.07	15.25	3.65	160.35
Last 5	14:03:03	1200.03	21.46	5.49	67.29	0.96	15.25	3.53	154.42
Last 5	14:08:03	1500.03	21.39	5.42	64.89	0.77	15.25	3.32	154.88
Last 5	14:13:03	1800.03	21.46	5.40	62.97	0.85	15.26	3.30	166.11
Last 5	14:18:03	2100.03	21.51	5.38	63.16	0.92	15.26	3.19	163.23
Variance 0			-0.06	-0.07	-2.40			-0.21	0.46
Variance 1			0.07	-0.02	-1.92			-0.02	11.24
Variance 2			0.05	-0.02	0.18			-0.11	-2.88

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-07 17:37:53

Project Information:

Operator Name J.Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 32 ft

Pump placement from TOC ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 37.74 ft
Screen Length 10 ft
Depth to Water 19.10 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2328295 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 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			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	17:16:15	600.02	19.16	5.09	57.97	1.22	19.15	1.26	164.93
Last 5	17:21:15	900.02	19.08	5.09	57.83	1.40	19.15	1.24	156.96
Last 5	17:26:15	1200.02	19.15	5.08	58.02	0.91	19.15	1.17	151.07
Last 5	17:31:15	1500.02	19.23	5.07	58.14	0.99	19.15	1.13	148.32
Last 5	17:36:15	1800.03	19.22	5.08	57.99	1.23	19.15	1.12	147.59
Variance 0			0.06	-0.01	0.19			-0.07	-5.90
Variance 1			0.08	-0.01	0.13			-0.05	-2.75
Variance 2			-0.00	0.01	-0.15			-0.01	-0.73

Notes

Sampled at 1250

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 13:55:10

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 408206
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 31 ft

Pump placement from TOC 2 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.98 ft
Screen Length 10 ft
Depth to Water 16.62 ft

Pumping Information:

Final Pumping Rate 140 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.12 in
Total Volume Pumped 5.0 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	14:10:30	1200.12	22.34	4.68	55.80	1.32	17.52	1.32	181.10
Last 5	14:15:30	1200.12	21.97	4.68	55.40	1.13	17.60	1.13	179.70
Last 5	14:20:30	1500.02	22.10	4.68	55.20	0.98	17.61	0.98	172.70
Last 5	14:25:30	1800.12	22.13	4.66	55.20	1.26	17.63	1.26	170.50
Last 5	14:30:30	2100.12	22.06	4.68	54.90	1.18	17.63	1.18	167.20
Variance 0			-0.15	0.01	0.12			0.14	-4.94
Variance 1			0.03	0.01	-0.15			0.00	-1.45
Variance 2			0.10	0.01	0.24			0.00	-4.37

Notes

Sampled at 1435

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-07 19:05:07

Project Information:

Operator Name J.Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.60 ft
Screen Length 10 ft
Depth to Water 16.55 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 33.48 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			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	18:43:20	600.04	20.38	5.44	494.49	1.09	18.10	0.53	211.39
Last 5	18:48:20	900.02	20.39	5.45	490.28	0.68	18.50	0.33	204.94
Last 5	18:53:20	1200.02	20.49	5.46	489.11	0.57	18.77	0.30	201.91
Last 5	18:58:20	1500.02	20.68	5.46	485.33	0.95	19.16	0.29	200.48
Last 5	19:03:20	1800.02	20.78	5.46	486.29	0.84	19.34	0.28	197.80
Variance 0			0.10	0.01	-1.17			-0.03	-3.04
Variance 1			0.19	-0.00	-3.78			-0.01	-1.43
Variance 2			0.10	-0.00	0.96			-0.00	-2.67

Notes

Sampled at 1420

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-07 14:58:04

Project Information:

Operator Name J.Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 34 ft

Pump placement from TOC ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.65 ft
Screen Length 5 ft
Depth to Water 17.91 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2417564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 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
			+/- 0	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Stabilization									
Last 5	14:36:02	2100.02	18.39	5.00	42.83	0.00	25.55	5.74	175.17
Last 5	14:41:02	2400.02	18.34	4.99	42.80	2.86	27.15	5.49	173.60
Last 5	14:46:02	2700.02	18.51	4.95	42.85	2.76	28.65	5.20	174.50
Last 5	14:51:02	3000.02	18.42	4.94	43.02	2.34	30.85	5.19	171.96
Last 5	14:56:02	3300.02	18.47	4.85	42.99	2.24	32.35	4.83	174.04
Variance 0			0.18	-0.04	0.05			-0.29	0.91
Variance 1			-0.09	-0.01	0.17			-0.01	-2.54
Variance 2			0.05	-0.09	-0.03			-0.37	2.07

Notes

Pumped dry

Grab Samples

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: 400-126512-1

TestAmerica Sample Delivery Group: LF 3 Phase 2

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:

9/21/2016 10:42:48 AM

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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	10
Sample Summary	11
Client Sample Results	12
Definitions	32
Chronicle	33
QC Association	40
QC Sample Results	46
Chain of Custody	56
Receipt Checklists	62
Certification Summary	63

Case Narrative

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Job ID: 400-126512-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-126512-1

HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: GWC-5 (400-126512-16), (400-126644-A-2), (400-126644-A-2 MS) and (400-126644-A-2 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The native sample and matrix spike (MS) associated with analytical batch 322202 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Metals

Method(s) 3005A: The following sample was received with an initial pH of >2. The sample was preserved upon receipt to the laboratory to a pH of <2: GWC-5 (400-126512-16). 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) 3005A: Sample contains sediment. GWA-1 (400-126512-12), GWA-2 (400-126512-13) and GWC-6 (400-126512-19)

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 321454 and analytical batch 321660 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 7470A: The method blank for prep batch 321468 contained Mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

General Chemistry

Method(s) SM 2540C: The second weighing of sample was missed, the first weight will be used for final result. Final result was non-detect. (MB 400-321650/1)

Detection Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-7

Lab Sample ID: 400-126512-2

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
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.024	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0063		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.014		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4

Lab Sample ID: 400-126512-3

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
Sulfate	7.0		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.88		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00046	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-5

Lab Sample ID: 400-126512-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.1		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
Sulfate	21		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	0.093		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.073		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0020	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00099	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00082	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000086	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-3A

Lab Sample ID: 400-126512-5

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
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	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
Chromium	0.0042		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00095	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
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B

Lab Sample ID: 400-126512-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	6.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.029	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0022	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00061	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0016		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000091	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	60		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-2

Lab Sample ID: 400-126512-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.023	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	5.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0027		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00060	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0033	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000070	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	42		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: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-4A

Lab Sample ID: 400-126512-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.42		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	0.000078	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: GWC-1

Lab Sample ID: 400-126512-9

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
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.023	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	0.22	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.000073	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: DUP-1

Lab Sample ID: 400-126512-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.42		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00061	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000079	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-126512-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	9.1		1.0	0.89	mg/L	1		300.0	Dissolved
Sulfate, Dissolved	6.8		1.0	0.70	mg/L	1		300.0	Dissolved
Boron, Dissolved	0.036	J	0.050	0.021	mg/L	5		6020	Dissolved
Barium, Dissolved	0.040		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	2.7		0.25	0.13	mg/L	5		6020	Dissolved
Mercury, Dissolved	0.000077	J B	0.00020	0.000070	mg/L	1		7470A	Dissolved
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-1

Lab Sample ID: 400-126512-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0		1.0	0.89	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-1 (Continued)

Lab Sample ID: 400-126512-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0089		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.86		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0084		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	0.029	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.12		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.023		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.082		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.023		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0043		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium - RA	0.00083		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	2200		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2

Lab Sample ID: 400-126512-13

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
Arsenic	0.00069	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00097	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	4.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.012		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0017	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0028		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00060	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium - RA	0.000090	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-3

Lab Sample ID: 400-126512-14

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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-126512-1
 SDG: LF 3 Phase 2

Client Sample ID: GWC-3 (Continued)

Lab Sample ID: 400-126512-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0031		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0082		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	0.000076	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-4B

Lab Sample ID: 400-126512-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.78	J	1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00071	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.16	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.000080	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	56		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-5

Lab Sample ID: 400-126512-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	110		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.0032		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.47		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	21		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.011		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.059		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.037		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium - RA	0.0010		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	500		50	34	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-126512-17

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: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: FERB-1

Lab Sample ID: 400-126512-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000089	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-126512-19

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	0.075		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00060	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	0.0069		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0060		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Thallium - RA	0.000095	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.000089	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: GWA-1(FILTERED)

Lab Sample ID: 400-126512-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	7.9		1.0	0.89	mg/L	1		300.0	Dissolved
Fluoride, Dissolved	0.086	J	0.20	0.082	mg/L	1		300.0	Dissolved
Barium, Dissolved	0.017		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	1.2		0.25	0.13	mg/L	5		6020	Dissolved
Chromium, Dissolved	0.0040		0.0025	0.0011	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.00073	J	0.0013	0.00024	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.0084		0.0050	0.0032	mg/L	5		6020	Dissolved
Mercury, Dissolved	0.000073	J B	0.00020	0.000070	mg/L	1		7470A	Dissolved
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2(FILTERED)

Lab Sample ID: 400-126512-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	12		1.0	0.89	mg/L	1		300.0	Dissolved
Fluoride, Dissolved	0.18	J	0.20	0.082	mg/L	1		300.0	Dissolved
Barium, Dissolved	0.035		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	2.7		0.25	0.13	mg/L	5		6020	Dissolved
Chromium, Dissolved	0.0031		0.0025	0.0011	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.00037	J	0.0013	0.00024	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.0096		0.0050	0.0032	mg/L	5		6020	Dissolved
Mercury, Dissolved	0.000079	J B	0.00020	0.000070	mg/L	1		7470A	Dissolved
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

Method Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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: 400-126512-1
 SDG: LF 3 Phase 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-126512-2	GWA-7	Water	08/30/16 15:30	08/30/16 17:47
400-126512-3	GWA-4	Water	08/31/16 09:50	09/01/16 11:00
400-126512-4	GWA-5	Water	08/31/16 12:00	09/01/16 11:00
400-126512-5	GWA-3A	Water	08/31/16 12:55	09/01/16 11:00
400-126512-6	GWA-3B	Water	08/31/16 13:55	09/01/16 11:00
400-126512-7	GWC-2	Water	08/31/16 14:55	09/01/16 11:00
400-126512-8	GWC-4A	Water	08/31/16 15:40	09/01/16 11:00
400-126512-9	GWC-1	Water	08/31/16 16:15	09/01/16 11:00
400-126512-10	DUP-1	Water	08/31/16 00:00	09/01/16 11:00
400-126512-11	GWA-3B (FILTERED)	Water	08/31/16 13:55	09/01/16 11:00
400-126512-12	GWA-1	Water	09/01/16 11:20	09/03/16 09:32
400-126512-13	GWA-2	Water	09/01/16 09:15	09/03/16 09:32
400-126512-14	GWC-3	Water	09/01/16 10:15	09/03/16 09:32
400-126512-15	GWC-4B	Water	09/01/16 13:10	09/03/16 09:32
400-126512-16	GWC-5	Water	09/01/16 12:45	09/03/16 09:32
400-126512-17	FB-1	Water	09/01/16 15:10	09/03/16 09:32
400-126512-18	FERB-1	Water	09/01/16 15:20	09/03/16 09:32
400-126512-19	GWC-6	Water	09/01/16 16:05	09/03/16 09:32
400-126512-20	GWA-1(FILTERED)	Water	09/01/16 11:20	09/03/16 09:32
400-126512-21	GWA-2(FILTERED)	Water	09/01/16 09:15	09/03/16 09:32

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-7
Date Collected: 08/30/16 15:30
Date Received: 08/30/16 17:47

Lab Sample ID: 400-126512-2
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			09/13/16 10:47	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 10:47	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 10:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/04/16 11:49	09/06/16 17:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/04/16 11:49	09/06/16 17:01	5
Barium	0.020		0.0025	0.00049	mg/L		09/04/16 11:49	09/06/16 17:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/04/16 11:49	09/06/16 17:01	5
Boron	0.024	J	0.050	0.021	mg/L		09/04/16 11:49	09/06/16 17:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/04/16 11:49	09/06/16 17:01	5
Calcium	1.4		0.25	0.13	mg/L		09/04/16 11:49	09/06/16 17:01	5
Chromium	0.0063		0.0025	0.0011	mg/L		09/04/16 11:49	09/06/16 17:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/04/16 11:49	09/06/16 17:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/04/16 11:49	09/06/16 17:01	5
Lithium	0.012		0.0050	0.0032	mg/L		09/04/16 11:49	09/06/16 17:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/04/16 11:49	09/06/16 17:01	5
Selenium	0.014		0.0013	0.00024	mg/L		09/04/16 11:49	09/06/16 17:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/04/16 11:49	09/06/16 17:01	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		09/03/16 13:38	09/06/16 10:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			09/02/16 16:55	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-4
Date Collected: 08/31/16 09:50
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-3
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			09/13/16 11:55	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 11:55	1
Sulfate	7.0		1.0	0.70	mg/L			09/13/16 11:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/07/16 17:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 17:56	5
Barium	0.041		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 17:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 17:56	5
Boron	<0.021	F1	0.050	0.021	mg/L		09/07/16 09:44	09/07/16 17:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 17:56	5
Calcium	0.88		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 17:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 17:56	5
Cobalt	0.00055	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 17:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 17:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 17:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 17:56	5
Selenium	0.00046	J	0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 17:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 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		09/06/16 13:40	09/09/16 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-5

Date Collected: 08/31/16 12:00

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.1		1.0	0.89	mg/L			09/13/16 12:18	1
Fluoride	0.13	J	0.20	0.082	mg/L			09/13/16 12:18	1
Sulfate	21		1.0	0.70	mg/L			09/13/16 12:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011	J	0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 18:32	5
Barium	0.093		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 18:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 18:32	5
Boron	0.073		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 18:32	5
Calcium	3.7		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 18:32	5
Chromium	0.0020	J	0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 18:32	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 18:32	5
Lead	0.00099	J	0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 18:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 18:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 18:32	5
Selenium	0.00082	J	0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 18:32	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 13:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 13:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 13:46	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000086	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	66		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-3A

Lab Sample ID: 400-126512-5

Date Collected: 08/31/16 12:55

Matrix: Water

Date Received: 09/01/16 11:00

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			09/13/16 12:41	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 12:41	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 12:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 18:36	5
Barium	0.043		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 18:36	5
Beryllium	0.00035	J	0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 18:36	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 18:36	5
Calcium	1.5		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 18:36	5
Chromium	0.0042		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 18:36	5
Cobalt	0.00095	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 18:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 18:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 18:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 18:36	5
Selenium	0.00035	J	0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 18:36	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 13:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 13:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 13:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	42		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-3B

Lab Sample ID: 400-126512-6

Date Collected: 08/31/16 13:55

Matrix: Water

Date Received: 09/01/16 11:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.4		1.0	0.89	mg/L			09/13/16 13:04	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 13:04	1
Sulfate	6.3		1.0	0.70	mg/L			09/13/16 13:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 18:41	5
Barium	0.044		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 18:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 18:41	5
Boron	0.029	J	0.050	0.021	mg/L		09/07/16 09:44	09/07/16 18:41	5
Calcium	2.7		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 18:41	5
Chromium	0.0022	J	0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 18:41	5
Cobalt	0.00061	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 18:41	5
Lead	0.0016		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 18:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 18:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 18:41	5
Selenium	0.00026	J	0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 18:41	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 13:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 13:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 13:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000091	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	60		5.0	3.4	mg/L			09/07/16 11:48	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-2
Date Collected: 08/31/16 14:55
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		1.0	0.89	mg/L			09/13/16 14:12	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 14:12	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 14:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 18:45	5
Barium	0.057		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 18:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 18:45	5
Boron	0.023	J	0.050	0.021	mg/L		09/07/16 09:44	09/07/16 18:45	5
Calcium	5.5		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 18:45	5
Chromium	0.0027		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 18:45	5
Cobalt	0.00060	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 18:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 18:45	5
Lithium	0.0033	J	0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 18:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 18:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 18:45	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 13:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 13:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 13:59	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		09/06/16 13:40	09/09/16 13:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	42		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-4A

Date Collected: 08/31/16 15:40

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.89	mg/L			09/13/16 14:35	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 14:35	1
Sulfate	1.7		1.0	0.70	mg/L			09/13/16 14:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 18:50	5
Barium	0.037		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 18:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 18:50	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 18:50	5
Calcium	0.42		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 18:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 18:50	5
Cobalt	0.00060	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 18:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 18:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 18:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 18:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 18:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:04	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		09/06/16 13:40	09/09/16 13:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-1
Date Collected: 08/31/16 16:15
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-9
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			09/13/16 14:58	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 14:58	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 14:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 18:54	5
Barium	0.019		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 18:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 18:54	5
Boron	0.023	J	0.050	0.021	mg/L		09/07/16 09:44	09/07/16 18:54	5
Calcium	0.22	J	0.25	0.13	mg/L		09/07/16 09:44	09/07/16 18:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 18:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 18:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 18:54	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 18:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 18:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 18:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:08	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		09/06/16 13:40	09/09/16 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: DUP-1

Date Collected: 08/31/16 00:00

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.89	mg/L			09/13/16 15:21	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 15:21	1
Sulfate	1.8		1.0	0.70	mg/L			09/13/16 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:12	5
Barium	0.041		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:12	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:12	5
Calcium	0.42		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:12	5
Cobalt	0.00061	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:12	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:13	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000079	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			09/03/16 15:45	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-126512-11

Date Collected: 08/31/16 13:55

Matrix: Water

Date Received: 09/01/16 11:00

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	9.1		1.0	0.89	mg/L			09/13/16 15:44	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			09/13/16 15:44	1
Sulfate, Dissolved	6.8		1.0	0.70	mg/L			09/13/16 15:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		09/06/16 13:10	09/07/16 17:20	5
Boron, Dissolved	0.036	J	0.050	0.021	mg/L		09/06/16 13:10	09/07/16 17:20	5
Barium, Dissolved	0.040		0.0025	0.00049	mg/L		09/06/16 13:10	09/07/16 17:20	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 13:10	09/07/16 17:20	5
Calcium, Dissolved	2.7		0.25	0.13	mg/L		09/06/16 13:10	09/07/16 17:20	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 13:10	09/07/16 17:20	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		09/06/16 13:10	09/07/16 17:20	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/06/16 13:10	09/07/16 17:20	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		09/06/16 13:10	09/07/16 17:20	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		09/06/16 13:10	09/07/16 17:20	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/06/16 13:10	09/07/16 17:20	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		09/06/16 13:10	09/07/16 17:20	5
Lithium, Dissolved	<0.0032		0.0050	0.0032	mg/L		09/06/16 13:10	09/07/16 17:20	5

Method: 6020 - Metals (ICP/MS) - Dissolved - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/06/16 13:10	09/08/16 12:43	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.000077	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			09/07/16 11:48	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-1
Date Collected: 09/01/16 11:20
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-12
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0		1.0	0.89	mg/L			09/13/16 16:06	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 16:06	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 16:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0089		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:17	5
Barium	0.86		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:17	5
Beryllium	0.0084		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:17	5
Boron	0.029	J	0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:17	5
Calcium	26		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:17	5
Chromium	0.12		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:17	5
Cobalt	0.023		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:17	5
Lead	0.082		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:17	5
Lithium	0.023		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:17	5
Selenium	0.0043		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:17	5
Thallium	0.00083		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:17	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		09/06/16 13:40	09/09/16 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2200		5.0	3.4	mg/L			09/07/16 13:28	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-2

Date Collected: 09/01/16 09:15

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-13

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			09/13/16 16:52	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 16:52	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00069	J	0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:26	5
Barium	0.057		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:26	5
Beryllium	0.00097	J	0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:26	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:26	5
Calcium	4.0		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:26	5
Chromium	0.012		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:26	5
Cobalt	0.0017	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:26	5
Lead	0.0028		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:26	5
Lithium	0.011		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:26	5
Selenium	0.00060	J	0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:26	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:22	5
Thallium	0.000090	J	0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-3

Date Collected: 09/01/16 10:15

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-14

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			09/13/16 17:15	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 17:15	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 17:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:30	5
Barium	0.037		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:30	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:30	5
Calcium	2.0		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:30	5
Chromium	0.0031		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:30	5
Cobalt	0.00052	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:30	5
Lithium	0.0082		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:30	5
Selenium	0.00026	J	0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:30	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000076	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		5.0	3.4	mg/L			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-4B

Date Collected: 09/01/16 13:10

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-15

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		1.0	0.89	mg/L			09/13/16 17:38	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 17:38	1
Sulfate	0.78	J	1.0	0.70	mg/L			09/13/16 17:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00071	J	0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:35	5
Barium	0.023		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:35	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:35	5
Calcium	0.16	J	0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:35	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:49	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56		5.0	3.4	mg/L			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-5
Date Collected: 09/01/16 12:45
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-16
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<8.9		10	8.9	mg/L			09/14/16 18:38	10
Fluoride	<0.82		2.0	0.82	mg/L			09/14/16 18:38	10
Sulfate	110		10	7.0	mg/L			09/14/16 18:38	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0032		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:39	5
Barium	0.47		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:39	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:39	5
Calcium	21		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:39	5
Cobalt	0.011		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:39	5
Molybdenum	0.059		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:39	5
Selenium	0.037		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:39	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:53	5
Thallium	0.0010		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:53	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		09/06/16 13:40	09/09/16 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	500		50	34	mg/L			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: FB-1
Date Collected: 09/01/16 15:10
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-17
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			09/13/16 19:09	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 19:09	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 19:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:44	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:44	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:44	5
Calcium	<0.13		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:44	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 14:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 14:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 14:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:25	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			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
 SDG: LF 3 Phase 2

Client Sample ID: FERB-1
Date Collected: 09/01/16 15:20
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-18
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			09/13/16 19:32	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 19:32	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 19:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:48	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:48	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:48	5
Calcium	<0.13		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:48	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 15:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 15:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 15:03	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000089	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-6

Date Collected: 09/01/16 16:05

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-19

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011	J	0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 19:53	5
Barium	0.075		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 19:53	5
Beryllium	0.00060	J	0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 19:53	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 19:53	5
Calcium	1.9		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 19:53	5
Chromium	0.0069		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 19:53	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 19:53	5
Lead	0.0060		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 19:53	5
Lithium	0.011		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 19:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 19:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 19:53	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 15:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 15:08	5
Thallium	0.000095	J	0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 15:08	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000089	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:39	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-1(FILTERED)

Lab Sample ID: 400-126512-20

Date Collected: 09/01/16 11:20

Matrix: Water

Date Received: 09/03/16 09:32

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	7.9		1.0	0.89	mg/L			09/12/16 23:44	1
Fluoride, Dissolved	0.086	J	0.20	0.082	mg/L			09/12/16 23:44	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			09/12/16 23:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		09/06/16 13:10	09/07/16 17:24	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		09/06/16 13:10	09/07/16 17:24	5
Barium, Dissolved	0.017		0.0025	0.00049	mg/L		09/06/16 13:10	09/07/16 17:24	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 13:10	09/07/16 17:24	5
Calcium, Dissolved	1.2		0.25	0.13	mg/L		09/06/16 13:10	09/07/16 17:24	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 13:10	09/07/16 17:24	5
Chromium, Dissolved	0.0040		0.0025	0.0011	mg/L		09/06/16 13:10	09/07/16 17:24	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/06/16 13:10	09/07/16 17:24	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		09/06/16 13:10	09/07/16 17:24	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		09/06/16 13:10	09/07/16 17:24	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/06/16 13:10	09/07/16 17:24	5
Selenium, Dissolved	0.00073	J	0.0013	0.00024	mg/L		09/06/16 13:10	09/07/16 17:24	5
Lithium, Dissolved	0.0084		0.0050	0.0032	mg/L		09/06/16 13:10	09/07/16 17:24	5

Method: 6020 - Metals (ICP/MS) - Dissolved - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/06/16 13:10	09/08/16 12:47	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.000073	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			09/07/16 13:21	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-2(FILTERED)

Lab Sample ID: 400-126512-21

Date Collected: 09/01/16 09:15

Matrix: Water

Date Received: 09/03/16 09:32

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	12		1.0	0.89	mg/L			09/13/16 00:07	1
Fluoride, Dissolved	0.18	J	0.20	0.082	mg/L			09/13/16 00:07	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			09/13/16 00:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		09/06/16 13:10	09/07/16 17:33	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		09/06/16 13:10	09/07/16 17:33	5
Barium, Dissolved	0.035		0.0025	0.00049	mg/L		09/06/16 13:10	09/07/16 17:33	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 13:10	09/07/16 17:33	5
Calcium, Dissolved	2.7		0.25	0.13	mg/L		09/06/16 13:10	09/07/16 17:33	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 13:10	09/07/16 17:33	5
Chromium, Dissolved	0.0031		0.0025	0.0011	mg/L		09/06/16 13:10	09/07/16 17:33	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/06/16 13:10	09/07/16 17:33	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		09/06/16 13:10	09/07/16 17:33	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		09/06/16 13:10	09/07/16 17:33	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/06/16 13:10	09/07/16 17:33	5
Selenium, Dissolved	0.00037	J	0.0013	0.00024	mg/L		09/06/16 13:10	09/07/16 17:33	5
Lithium, Dissolved	0.0096		0.0050	0.0032	mg/L		09/06/16 13:10	09/07/16 17:33	5

Method: 6020 - Metals (ICP/MS) - Dissolved - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/06/16 13:10	09/08/16 12:52	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.000079	J B	0.00020	0.000070	mg/L		09/06/16 13:40	09/09/16 13:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	80		5.0	3.4	mg/L			09/07/16 13:21	1

Definitions/Glossary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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.
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: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-7

Date Collected: 08/30/16 15:30

Date Received: 08/30/16 17:47

Lab Sample ID: 400-126512-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 10:47	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321354	09/04/16 11:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	321510	09/06/16 17:01	RJB	TAL PEN
Total/NA	Prep	7470A			321179	09/03/16 13:38	DN1	TAL PEN
Total/NA	Analysis	7470A		1	321424	09/06/16 10:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321249	09/02/16 16:55	TET	TAL PEN

Client Sample ID: GWA-4

Date Collected: 08/31/16 09:50

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 11:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 17:56	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 13:10	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 12:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: GWA-5

Date Collected: 08/31/16 12:00

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 12:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 18:32	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 13:46	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 12:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: GWA-3A

Date Collected: 08/31/16 12:55

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 12:41	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-3A

Date Collected: 08/31/16 12:55

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	321660	09/07/16 18:36	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 13:50	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: GWA-3B

Date Collected: 08/31/16 13:55

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 13:04	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 18:41	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 13:55	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321595	09/07/16 11:48	JLB	TAL PEN

Client Sample ID: GWC-2

Date Collected: 08/31/16 14:55

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 14:12	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 18:45	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 13:59	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: GWC-4A

Date Collected: 08/31/16 15:40

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 14:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-4A

Lab Sample ID: 400-126512-8

Date Collected: 08/31/16 15:40

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	321660	09/07/16 18:50	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:04	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-126512-9

Date Collected: 08/31/16 16:15

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 14:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 18:54	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:08	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-126512-10

Date Collected: 08/31/16 00:00

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 15:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:12	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:13	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321332	09/03/16 15:45	TET	TAL PEN

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-126512-11

Date Collected: 08/31/16 13:55

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	322484	09/13/16 15:44	TAJ	TAL PEN
Dissolved	Prep	3005A			321408	09/06/16 13:10	KWN	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-126512-11

Date Collected: 08/31/16 13:55

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6020		5	321660	09/07/16 17:20	RJB	TAL PEN
Dissolved	Prep	3005A	RA		321408	09/06/16 13:10	KWN	TAL PEN
Dissolved	Analysis	6020	RA	5	321877	09/08/16 12:43	RJB	TAL PEN
Dissolved	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Dissolved	Analysis	7470A		1	322010	09/09/16 13:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321595	09/07/16 11:48	JLB	TAL PEN

Client Sample ID: GWA-1

Lab Sample ID: 400-126512-12

Date Collected: 09/01/16 11:20

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 16:06	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:17	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:17	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321596	09/07/16 13:28	JLB	TAL PEN

Client Sample ID: GWA-2

Lab Sample ID: 400-126512-13

Date Collected: 09/01/16 09:15

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 16:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:26	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:22	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: GWC-3

Lab Sample ID: 400-126512-14

Date Collected: 09/01/16 10:15

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 17:15	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: GWC-3

Lab Sample ID: 400-126512-14

Date Collected: 09/01/16 10:15

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:30	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:31	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: GWC-4B

Lab Sample ID: 400-126512-15

Date Collected: 09/01/16 13:10

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 17:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:35	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:49	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: GWC-5

Lab Sample ID: 400-126512-16

Date Collected: 09/01/16 12:45

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	322758	09/14/16 18:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:39	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:53	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-126512-17

Date Collected: 09/01/16 15:10

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 19:09	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Client Sample ID: FB-1

Lab Sample ID: 400-126512-17

Date Collected: 09/01/16 15:10

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:44	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 14:59	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-126512-18

Date Collected: 09/01/16 15:20

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	322484	09/13/16 19:32	TAJ	TAL PEN
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:48	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 15:03	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: GWC-6

Lab Sample ID: 400-126512-19

Date Collected: 09/01/16 16:05

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	321660	09/07/16 19:53	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		321454	09/07/16 09:44	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	321877	09/08/16 15:08	RJB	TAL PEN
Total/NA	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322010	09/09/16 13:39	JAP	TAL PEN

Client Sample ID: GWA-1(FILTERED)

Lab Sample ID: 400-126512-20

Date Collected: 09/01/16 11:20

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	322202	09/12/16 23:44	TAJ	TAL PEN
Dissolved	Prep	3005A			321408	09/06/16 13:10	KWN	TAL PEN
Dissolved	Analysis	6020		5	321660	09/07/16 17:24	RJB	TAL PEN
Dissolved	Prep	3005A	RA		321408	09/06/16 13:10	KWN	TAL PEN
Dissolved	Analysis	6020	RA	5	321877	09/08/16 12:47	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Dissolved	Analysis	7470A		1	322010	09/09/16 13:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	JLB	TAL PEN

Client Sample ID: GWA-2(FILTERED)

Lab Sample ID: 400-126512-21

Date Collected: 09/01/16 09:15

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	322202	09/13/16 00:07	TAJ	TAL PEN
Dissolved	Prep	3005A			321408	09/06/16 13:10	KWN	TAL PEN
Dissolved	Analysis	6020		5	321660	09/07/16 17:33	RJB	TAL PEN
Dissolved	Prep	3005A	RA		321408	09/06/16 13:10	KWN	TAL PEN
Dissolved	Analysis	6020	RA	5	321877	09/08/16 12:52	RJB	TAL PEN
Dissolved	Prep	7470A			321468	09/06/16 13:40	JAP	TAL PEN
Dissolved	Analysis	7470A		1	322010	09/09/16 13:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	321650	09/07/16 13:21	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: 400-126512-1
SDG: LF 3 Phase 2

HPLC/IC

Analysis Batch: 322202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-20	GWA-1(FILTERED)	Dissolved	Water	300.0	
400-126512-21	GWA-2(FILTERED)	Dissolved	Water	300.0	
MB 400-322202/4	Method Blank	Total/NA	Water	300.0	
LCS 400-322202/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-322202/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-126644-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-126645-B-1 MS	Matrix Spike	Total/NA	Water	300.0	

Analysis Batch: 322484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total/NA	Water	300.0	
400-126512-3	GWA-4	Total/NA	Water	300.0	
400-126512-4	GWA-5	Total/NA	Water	300.0	
400-126512-5	GWA-3A	Total/NA	Water	300.0	
400-126512-6	GWA-3B	Total/NA	Water	300.0	
400-126512-7	GWC-2	Total/NA	Water	300.0	
400-126512-8	GWC-4A	Total/NA	Water	300.0	
400-126512-9	GWC-1	Total/NA	Water	300.0	
400-126512-10	DUP-1	Total/NA	Water	300.0	
400-126512-11	GWA-3B (FILTERED)	Dissolved	Water	300.0	
400-126512-12	GWA-1	Total/NA	Water	300.0	
400-126512-13	GWA-2	Total/NA	Water	300.0	
400-126512-14	GWC-3	Total/NA	Water	300.0	
400-126512-15	GWC-4B	Total/NA	Water	300.0	
400-126512-17	FB-1	Total/NA	Water	300.0	
400-126512-18	FERB-1	Total/NA	Water	300.0	
MB 400-322484/4	Method Blank	Total/NA	Water	300.0	
LCS 400-322484/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-322484/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-126512-2 MS	GWA-7	Total/NA	Water	300.0	
400-126512-2 MSD	GWA-7	Total/NA	Water	300.0	
400-126512-12 MS	GWA-1	Total/NA	Water	300.0	

Analysis Batch: 322758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-16	GWC-5	Total/NA	Water	300.0	
MB 400-322758/4	Method Blank	Total/NA	Water	300.0	
LCS 400-322758/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-322758/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-126677-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-126677-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 321179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Metals (Continued)

Prep Batch: 321354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total Recoverable	Water	3005A	
MB 400-321354/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-321354/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-126621-B-3-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-126621-B-3-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 321408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-11	GWA-3B (FILTERED)	Dissolved	Water	3005A	
400-126512-11 - RA	GWA-3B (FILTERED)	Dissolved	Water	3005A	
400-126512-20 - RA	GWA-1(FILTERED)	Dissolved	Water	3005A	
400-126512-20	GWA-1(FILTERED)	Dissolved	Water	3005A	
400-126512-21	GWA-2(FILTERED)	Dissolved	Water	3005A	
400-126512-21 - RA	GWA-2(FILTERED)	Dissolved	Water	3005A	
MB 400-321408/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-321408/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 321424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total/NA	Water	7470A	321179

Prep Batch: 321454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-3 - RA	GWA-4	Total Recoverable	Water	3005A	
400-126512-3	GWA-4	Total Recoverable	Water	3005A	
400-126512-4 - RA	GWA-5	Total Recoverable	Water	3005A	
400-126512-4	GWA-5	Total Recoverable	Water	3005A	
400-126512-5 - RA	GWA-3A	Total Recoverable	Water	3005A	
400-126512-5	GWA-3A	Total Recoverable	Water	3005A	
400-126512-6 - RA	GWA-3B	Total Recoverable	Water	3005A	
400-126512-6	GWA-3B	Total Recoverable	Water	3005A	
400-126512-7 - RA	GWC-2	Total Recoverable	Water	3005A	
400-126512-7	GWC-2	Total Recoverable	Water	3005A	
400-126512-8	GWC-4A	Total Recoverable	Water	3005A	
400-126512-8 - RA	GWC-4A	Total Recoverable	Water	3005A	
400-126512-9 - RA	GWC-1	Total Recoverable	Water	3005A	
400-126512-9	GWC-1	Total Recoverable	Water	3005A	
400-126512-10 - RA	DUP-1	Total Recoverable	Water	3005A	
400-126512-10	DUP-1	Total Recoverable	Water	3005A	
400-126512-12	GWA-1	Total Recoverable	Water	3005A	
400-126512-12 - RA	GWA-1	Total Recoverable	Water	3005A	
400-126512-13 - RA	GWA-2	Total Recoverable	Water	3005A	
400-126512-13	GWA-2	Total Recoverable	Water	3005A	
400-126512-14	GWC-3	Total Recoverable	Water	3005A	
400-126512-14 - RA	GWC-3	Total Recoverable	Water	3005A	
400-126512-15 - RA	GWC-4B	Total Recoverable	Water	3005A	
400-126512-15	GWC-4B	Total Recoverable	Water	3005A	
400-126512-16 - RA	GWC-5	Total Recoverable	Water	3005A	
400-126512-16	GWC-5	Total Recoverable	Water	3005A	
400-126512-17	FB-1	Total Recoverable	Water	3005A	
400-126512-17 - RA	FB-1	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Metals (Continued)

Prep Batch: 321454 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-18	FERB-1	Total Recoverable	Water	3005A	
400-126512-18 - RA	FERB-1	Total Recoverable	Water	3005A	
400-126512-19 - RA	GWC-6	Total Recoverable	Water	3005A	
400-126512-19	GWC-6	Total Recoverable	Water	3005A	
MB 400-321454/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-321454/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-126512-3 MS	GWA-4	Total Recoverable	Water	3005A	
400-126512-3 MS - RA	GWA-4	Total Recoverable	Water	3005A	
400-126512-3 MSD	GWA-4	Total Recoverable	Water	3005A	
400-126512-3 MSD - RA	GWA-4	Total Recoverable	Water	3005A	

Prep Batch: 321468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-3	GWA-4	Total/NA	Water	7470A	
400-126512-4	GWA-5	Total/NA	Water	7470A	
400-126512-5	GWA-3A	Total/NA	Water	7470A	
400-126512-6	GWA-3B	Total/NA	Water	7470A	
400-126512-7	GWC-2	Total/NA	Water	7470A	
400-126512-8	GWC-4A	Total/NA	Water	7470A	
400-126512-9	GWC-1	Total/NA	Water	7470A	
400-126512-10	DUP-1	Total/NA	Water	7470A	
400-126512-11	GWA-3B (FILTERED)	Dissolved	Water	7470A	
400-126512-12	GWA-1	Total/NA	Water	7470A	
400-126512-13	GWA-2	Total/NA	Water	7470A	
400-126512-14	GWC-3	Total/NA	Water	7470A	
400-126512-15	GWC-4B	Total/NA	Water	7470A	
400-126512-16	GWC-5	Total/NA	Water	7470A	
400-126512-17	FB-1	Total/NA	Water	7470A	
400-126512-18	FERB-1	Total/NA	Water	7470A	
400-126512-19	GWC-6	Total/NA	Water	7470A	
400-126512-20	GWA-1(FILTERED)	Dissolved	Water	7470A	
400-126512-21	GWA-2(FILTERED)	Dissolved	Water	7470A	
MB 400-321468/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-321468/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-126512-4 MS	GWA-5	Total/NA	Water	7470A	
400-126512-4 MSD	GWA-5	Total/NA	Water	7470A	

Analysis Batch: 321510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total Recoverable	Water	6020	321354
MB 400-321354/1-A ^5	Method Blank	Total Recoverable	Water	6020	321354
LCS 400-321354/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	321354
400-126621-B-3-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	321354
400-126621-B-3-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	321354

Analysis Batch: 321660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-3	GWA-4	Total Recoverable	Water	6020	321454
400-126512-4	GWA-5	Total Recoverable	Water	6020	321454
400-126512-5	GWA-3A	Total Recoverable	Water	6020	321454
400-126512-6	GWA-3B	Total Recoverable	Water	6020	321454

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Metals (Continued)

Analysis Batch: 321660 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-7	GWC-2	Total Recoverable	Water	6020	321454
400-126512-8	GWC-4A	Total Recoverable	Water	6020	321454
400-126512-9	GWC-1	Total Recoverable	Water	6020	321454
400-126512-10	DUP-1	Total Recoverable	Water	6020	321454
400-126512-11	GWA-3B (FILTERED)	Dissolved	Water	6020	321408
400-126512-12	GWA-1	Total Recoverable	Water	6020	321454
400-126512-13	GWA-2	Total Recoverable	Water	6020	321454
400-126512-14	GWC-3	Total Recoverable	Water	6020	321454
400-126512-15	GWC-4B	Total Recoverable	Water	6020	321454
400-126512-16	GWC-5	Total Recoverable	Water	6020	321454
400-126512-17	FB-1	Total Recoverable	Water	6020	321454
400-126512-18	FERB-1	Total Recoverable	Water	6020	321454
400-126512-19	GWC-6	Total Recoverable	Water	6020	321454
400-126512-20	GWA-1(FILTERED)	Dissolved	Water	6020	321408
400-126512-21	GWA-2(FILTERED)	Dissolved	Water	6020	321408
MB 400-321408/1-A ^5	Method Blank	Total Recoverable	Water	6020	321408
MB 400-321454/1-A ^5	Method Blank	Total Recoverable	Water	6020	321454
LCS 400-321408/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	321408
LCS 400-321454/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	321454
400-126512-3 MS	GWA-4	Total Recoverable	Water	6020	321454
400-126512-3 MSD	GWA-4	Total Recoverable	Water	6020	321454

Analysis Batch: 321877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-3 - RA	GWA-4	Total Recoverable	Water	6020	321454
400-126512-4 - RA	GWA-5	Total Recoverable	Water	6020	321454
400-126512-5 - RA	GWA-3A	Total Recoverable	Water	6020	321454
400-126512-6 - RA	GWA-3B	Total Recoverable	Water	6020	321454
400-126512-7 - RA	GWC-2	Total Recoverable	Water	6020	321454
400-126512-8 - RA	GWC-4A	Total Recoverable	Water	6020	321454
400-126512-9 - RA	GWC-1	Total Recoverable	Water	6020	321454
400-126512-10 - RA	DUP-1	Total Recoverable	Water	6020	321454
400-126512-11 - RA	GWA-3B (FILTERED)	Dissolved	Water	6020	321408
400-126512-12 - RA	GWA-1	Total Recoverable	Water	6020	321454
400-126512-13 - RA	GWA-2	Total Recoverable	Water	6020	321454
400-126512-14 - RA	GWC-3	Total Recoverable	Water	6020	321454
400-126512-15 - RA	GWC-4B	Total Recoverable	Water	6020	321454
400-126512-16 - RA	GWC-5	Total Recoverable	Water	6020	321454
400-126512-17 - RA	FB-1	Total Recoverable	Water	6020	321454
400-126512-18 - RA	FERB-1	Total Recoverable	Water	6020	321454
400-126512-19 - RA	GWC-6	Total Recoverable	Water	6020	321454
400-126512-20 - RA	GWA-1(FILTERED)	Dissolved	Water	6020	321408
400-126512-21 - RA	GWA-2(FILTERED)	Dissolved	Water	6020	321408
MB 400-321454/1-A ^5	Method Blank	Total Recoverable	Water	6020	321454
LCS 400-321454/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	321454
400-126512-3 MS - RA	GWA-4	Total Recoverable	Water	6020	321454
400-126512-3 MSD - RA	GWA-4	Total Recoverable	Water	6020	321454

Analysis Batch: 322010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-3	GWA-4	Total/NA	Water	7470A	321468

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Metals (Continued)

Analysis Batch: 322010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-4	GWA-5	Total/NA	Water	7470A	321468
400-126512-5	GWA-3A	Total/NA	Water	7470A	321468
400-126512-6	GWA-3B	Total/NA	Water	7470A	321468
400-126512-7	GWC-2	Total/NA	Water	7470A	321468
400-126512-8	GWC-4A	Total/NA	Water	7470A	321468
400-126512-9	GWC-1	Total/NA	Water	7470A	321468
400-126512-10	DUP-1	Total/NA	Water	7470A	321468
400-126512-11	GWA-3B (FILTERED)	Dissolved	Water	7470A	321468
400-126512-12	GWA-1	Total/NA	Water	7470A	321468
400-126512-13	GWA-2	Total/NA	Water	7470A	321468
400-126512-14	GWC-3	Total/NA	Water	7470A	321468
400-126512-15	GWC-4B	Total/NA	Water	7470A	321468
400-126512-16	GWC-5	Total/NA	Water	7470A	321468
400-126512-17	FB-1	Total/NA	Water	7470A	321468
400-126512-18	FERB-1	Total/NA	Water	7470A	321468
400-126512-19	GWC-6	Total/NA	Water	7470A	321468
400-126512-20	GWA-1(FILTERED)	Dissolved	Water	7470A	321468
400-126512-21	GWA-2(FILTERED)	Dissolved	Water	7470A	321468
MB 400-321468/14-A	Method Blank	Total/NA	Water	7470A	321468
LCS 400-321468/15-A	Lab Control Sample	Total/NA	Water	7470A	321468
400-126512-4 MS	GWA-5	Total/NA	Water	7470A	321468
400-126512-4 MSD	GWA-5	Total/NA	Water	7470A	321468

General Chemistry

Analysis Batch: 321249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total/NA	Water	SM 2540C	
MB 400-321249/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-321249/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-126480-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 321332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-3	GWA-4	Total/NA	Water	SM 2540C	
400-126512-4	GWA-5	Total/NA	Water	SM 2540C	
400-126512-5	GWA-3A	Total/NA	Water	SM 2540C	
400-126512-7	GWC-2	Total/NA	Water	SM 2540C	
400-126512-8	GWC-4A	Total/NA	Water	SM 2540C	
400-126512-9	GWC-1	Total/NA	Water	SM 2540C	
400-126512-10	DUP-1	Total/NA	Water	SM 2540C	
MB 400-321332/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-321332/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-126512-3 DU	GWA-4	Total/NA	Water	SM 2540C	

Analysis Batch: 321595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-6	GWA-3B	Total/NA	Water	SM 2540C	
400-126512-11	GWA-3B (FILTERED)	Total/NA	Water	SM 2540C	
MB 400-321595/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-126512-1
 SDG: LF 3 Phase 2

General Chemistry (Continued)

Analysis Batch: 321595 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-321595/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-126512-6 DU	GWA-3B	Total/NA	Water	SM 2540C	

Analysis Batch: 321596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-12	GWA-1	Total/NA	Water	SM 2540C	
MB 400-321596/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-321596/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-126631-G-10 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 321650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-13	GWA-2	Total/NA	Water	SM 2540C	
400-126512-14	GWC-3	Total/NA	Water	SM 2540C	
400-126512-15	GWC-4B	Total/NA	Water	SM 2540C	
400-126512-16	GWC-5	Total/NA	Water	SM 2540C	
400-126512-17	FB-1	Total/NA	Water	SM 2540C	
400-126512-18	FERB-1	Total/NA	Water	SM 2540C	
400-126512-20	GWA-1(FILTERED)	Total/NA	Water	SM 2540C	
400-126512-21	GWA-2(FILTERED)	Total/NA	Water	SM 2540C	
MB 400-321650/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-321650/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-126512-13 DU	GWA-2	Total/NA	Water	SM 2540C	
400-126512-15 DU	GWC-4B	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-322202/4
Matrix: Water
Analysis Batch: 322202

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	<0.89		1.0	0.89	mg/L			09/12/16 10:47	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			09/12/16 10:47	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			09/12/16 10:47	1

Lab Sample ID: LCS 400-322202/5
Matrix: Water
Analysis Batch: 322202

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride, Dissolved	10.0	9.51		mg/L		95	90 - 110
Fluoride, Dissolved	10.0	9.61		mg/L		96	90 - 110
Sulfate, Dissolved	10.0	9.75		mg/L		97	90 - 110

Lab Sample ID: LCSD 400-322202/6
Matrix: Water
Analysis Batch: 322202

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, Dissolved	10.0	9.48		mg/L		95	90 - 110	0	15
Fluoride, Dissolved	10.0	9.96		mg/L		100	90 - 110	4	15
Sulfate, Dissolved	10.0	9.74		mg/L		97	90 - 110	0	15

Lab Sample ID: 400-126644-A-2 MSD
Matrix: Water
Analysis Batch: 322202

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, Dissolved	<4.5		50.0	53.6		mg/L		107	80 - 120	0	20
Fluoride, Dissolved	<0.41		50.0	44.7		mg/L		89	80 - 120	17	20
Sulfate, Dissolved	200		50.0	249		mg/L		100	80 - 120	1	20

Lab Sample ID: 400-126645-B-1 MS
Matrix: Water
Analysis Batch: 322202

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, Dissolved	43		10.0	52.0	E 4	mg/L		95	80 - 120
Fluoride, Dissolved	0.11	J	10.0	11.1		mg/L		110	80 - 120
Sulfate, Dissolved	<0.70		10.0	10.7		mg/L		107	80 - 120

Lab Sample ID: MB 400-322484/4
Matrix: Water
Analysis Batch: 322484

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			09/13/16 09:15	1
Fluoride	<0.082		0.20	0.082	mg/L			09/13/16 09:15	1
Sulfate	<0.70		1.0	0.70	mg/L			09/13/16 09:15	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-322484/5
Matrix: Water
Analysis Batch: 322484

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.56		mg/L		96	90 - 110
Fluoride	10.0	9.99		mg/L		100	90 - 110
Sulfate	10.0	9.63		mg/L		96	90 - 110

Lab Sample ID: LCSD 400-322484/6
Matrix: Water
Analysis Batch: 322484

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	9.53		mg/L		95	90 - 110	0	15
Fluoride	10.0	10.1		mg/L		101	90 - 110	1	15
Sulfate	10.0	9.94		mg/L		99	90 - 110	3	15

Lab Sample ID: 400-126512-2 MS
Matrix: Water
Analysis Batch: 322484

Client Sample ID: GWA-7
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	16.7		mg/L		97	80 - 120
Fluoride	<0.082		10.0	10.5		mg/L		105	80 - 120
Sulfate	<0.70		10.0	10.1		mg/L		101	80 - 120

Lab Sample ID: 400-126512-2 MSD
Matrix: Water
Analysis Batch: 322484

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.9		10.0	16.6		mg/L		97	80 - 120	0	20
Fluoride	<0.082		10.0	10.4		mg/L		104	80 - 120	1	20
Sulfate	<0.70		10.0	10.2		mg/L		102	80 - 120	1	20

Lab Sample ID: 400-126512-12 MS
Matrix: Water
Analysis Batch: 322484

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.0		10.0	18.0		mg/L		101	80 - 120
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120
Sulfate	<0.70		10.0	11.0		mg/L		110	80 - 120

Lab Sample ID: MB 400-322758/4
Matrix: Water
Analysis Batch: 322758

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			09/14/16 15:03	1
Fluoride	<0.082		0.20	0.082	mg/L			09/14/16 15:03	1
Sulfate	<0.70		1.0	0.70	mg/L			09/14/16 15:03	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-322758/5
Matrix: Water
Analysis Batch: 322758

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	9.45		mg/L		95	90 - 110
Fluoride	10.0	10.0		mg/L		100	90 - 110
Sulfate	10.0	9.23		mg/L		92	90 - 110

Lab Sample ID: LCSD 400-322758/6
Matrix: Water
Analysis Batch: 322758

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	9.45		mg/L		95	90 - 110	0	15
Fluoride	10.0	10.1		mg/L		101	90 - 110	0	15
Sulfate	10.0	9.27		mg/L		93	90 - 110	0	15

Lab Sample ID: 400-126677-A-1 MS
Matrix: Water
Analysis Batch: 322758

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	55		50.0	102		mg/L		96	80 - 120
Fluoride	<0.41		50.0	52.1		mg/L		104	80 - 120
Sulfate	<3.5		50.0	48.9		mg/L		98	80 - 120

Lab Sample ID: 400-126677-A-1 MSD
Matrix: Water
Analysis Batch: 322758

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	55		50.0	102		mg/L		95	80 - 120	0	20
Fluoride	<0.41		50.0	52.1		mg/L		104	80 - 120	0	20
Sulfate	<3.5		50.0	49.3		mg/L		99	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-321354/1-A ^5
Matrix: Water
Analysis Batch: 321510

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 321354

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/04/16 11:49	09/06/16 16:39	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/04/16 11:49	09/06/16 16:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/04/16 11:49	09/06/16 16:39	5
Boron	<0.021		0.050	0.021	mg/L		09/04/16 11:49	09/06/16 16:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/04/16 11:49	09/06/16 16:39	5
Calcium	<0.13		0.25	0.13	mg/L		09/04/16 11:49	09/06/16 16:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/04/16 11:49	09/06/16 16:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/04/16 11:49	09/06/16 16:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/04/16 11:49	09/06/16 16:39	5
Antimony	<0.0010		0.0025	0.0010	mg/L		09/04/16 11:49	09/06/16 16:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/04/16 11:49	09/06/16 16:39	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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

Lab Sample ID: MB 400-321354/1-A ^5
Matrix: Water
Analysis Batch: 321510

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 321354

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.00024		0.0013	0.00024	mg/L		09/04/16 11:49	09/06/16 16:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/04/16 11:49	09/06/16 16:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/04/16 11:49	09/06/16 16:39	5

Lab Sample ID: LCS 400-321354/2-A ^1
Matrix: Water
Analysis Batch: 321510

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 321354

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0564		mg/L		113	80 - 120
Barium	0.0500	0.0470		mg/L		94	80 - 120
Beryllium	0.0500	0.0501		mg/L		100	80 - 120
Boron	0.100	0.0998		mg/L		100	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Calcium	5.00	4.91		mg/L		98	80 - 120
Chromium	0.0500	0.0511		mg/L		102	80 - 120
Cobalt	0.0500	0.0479		mg/L		96	80 - 120
Lead	0.0500	0.0527		mg/L		105	80 - 120
Antimony	0.0500	0.0533		mg/L		107	80 - 120
Molybdenum	0.0500	0.0516		mg/L		103	80 - 120
Selenium	0.0500	0.0521		mg/L		104	80 - 120
Lithium	0.0500	0.0518		mg/L		104	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

Lab Sample ID: 400-126621-B-3-B MS ^5
Matrix: Water
Analysis Batch: 321510

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 321354

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	<0.00046		0.0500	0.0581		mg/L		116	75 - 125
Barium	0.030		0.0500	0.0773		mg/L		94	75 - 125
Beryllium	<0.00034		0.0500	0.0537		mg/L		107	75 - 125
Boron	0.14		0.100	0.257		mg/L		118	75 - 125
Cadmium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125
Calcium	12		5.00	17.1		mg/L		103	75 - 125
Chromium	0.0033		0.0500	0.0547		mg/L		103	75 - 125
Cobalt	<0.00040		0.0500	0.0486		mg/L		97	75 - 125
Lead	<0.00035		0.0500	0.0558		mg/L		112	75 - 125
Antimony	<0.0010		0.0500	0.0543		mg/L		109	75 - 125
Molybdenum	<0.00085		0.0500	0.0524		mg/L		105	75 - 125
Selenium	<0.00024		0.0500	0.0519		mg/L		104	75 - 125
Lithium	<0.0032		0.0500	0.0560		mg/L		112	75 - 125
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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

Lab Sample ID: 400-126621-B-3-C MSD ^5
Matrix: Water
Analysis Batch: 321510

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 321354

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Arsenic	<0.00046		0.0500	0.0561		mg/L		112	75 - 125	4	20
Barium	0.030		0.0500	0.0763		mg/L		92	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0504		mg/L		101	75 - 125	6	20
Boron	0.14		0.100	0.238		mg/L		99	75 - 125	8	20
Cadmium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125	1	20
Calcium	12		5.00	16.7		mg/L		95	75 - 125	2	20
Chromium	0.0033		0.0500	0.0535		mg/L		100	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0474		mg/L		95	75 - 125	3	20
Lead	<0.00035		0.0500	0.0553		mg/L		111	75 - 125	1	20
Antimony	<0.0010		0.0500	0.0528		mg/L		106	75 - 125	3	20
Molybdenum	<0.00085		0.0500	0.0504		mg/L		101	75 - 125	4	20
Selenium	<0.00024		0.0500	0.0509		mg/L		102	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0549		mg/L		110	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0100		mg/L		100	75 - 125	0	20

Lab Sample ID: MB 400-321408/1-A ^5
Matrix: Water
Analysis Batch: 321660

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 321408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		09/06/16 10:04	09/07/16 15:24	5
Barium, Dissolved	<0.00049		0.0025	0.00049	mg/L		09/06/16 10:04	09/07/16 15:24	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 10:04	09/07/16 15:24	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		09/06/16 10:04	09/07/16 15:24	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/06/16 10:04	09/07/16 15:24	5
Calcium, Dissolved	<0.13		0.25	0.13	mg/L		09/06/16 10:04	09/07/16 15:24	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		09/06/16 10:04	09/07/16 15:24	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/06/16 10:04	09/07/16 15:24	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		09/06/16 10:04	09/07/16 15:24	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/06/16 10:04	09/07/16 15:24	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		09/06/16 10:04	09/07/16 15:24	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		09/06/16 10:04	09/07/16 15:24	5
Lithium, Dissolved	<0.0032		0.0050	0.0032	mg/L		09/06/16 10:04	09/07/16 15:24	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/06/16 10:04	09/07/16 15:24	5

Lab Sample ID: LCS 400-321408/2-A ^1
Matrix: Water
Analysis Batch: 321660

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 321408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic, Dissolved	0.0500	0.0540		mg/L		108	80 - 120
Barium, Dissolved	0.0500	0.0493		mg/L		99	80 - 120
Beryllium, Dissolved	0.0500	0.0511		mg/L		102	80 - 120
Boron, Dissolved	0.100	0.102		mg/L		102	80 - 120
Cadmium, Dissolved	0.0500	0.0478		mg/L		96	80 - 120
Calcium, Dissolved	5.00	4.87		mg/L		97	80 - 120
Chromium, Dissolved	0.0500	0.0501		mg/L		100	80 - 120
Cobalt, Dissolved	0.0500	0.0517		mg/L		103	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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

Lab Sample ID: LCS 400-321408/2-A ^1
Matrix: Water
Analysis Batch: 321660

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 321408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead, Dissolved	0.0500	0.0500		mg/L		100	80 - 120
Antimony, Dissolved	0.0500	0.0514		mg/L		103	80 - 120
Molybdenum, Dissolved	0.0500	0.0501		mg/L		100	80 - 120
Selenium, Dissolved	0.0500	0.0502		mg/L		100	80 - 120
Lithium, Dissolved	0.0500	0.0503		mg/L		101	80 - 120
Thallium, Dissolved	0.0100	0.00969		mg/L		97	80 - 120

Lab Sample ID: MB 400-321454/1-A ^5
Matrix: Water
Analysis Batch: 321660

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/07/16 09:44	09/07/16 17:47	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/07/16 09:44	09/07/16 17:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/07/16 17:47	5
Boron	<0.021		0.050	0.021	mg/L		09/07/16 09:44	09/07/16 17:47	5
Calcium	<0.13		0.25	0.13	mg/L		09/07/16 09:44	09/07/16 17:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/07/16 09:44	09/07/16 17:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/07/16 09:44	09/07/16 17:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/07/16 09:44	09/07/16 17:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/07/16 09:44	09/07/16 17:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/07/16 09:44	09/07/16 17:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/07/16 09:44	09/07/16 17:47	5

Lab Sample ID: MB 400-321454/1-A ^5
Matrix: Water
Analysis Batch: 321877

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/07/16 09:44	09/08/16 13:01	5
Antimony	<0.0010		0.0025	0.0010	mg/L		09/07/16 09:44	09/08/16 13:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/07/16 09:44	09/08/16 13:01	5

Lab Sample ID: LCS 400-321454/2-A ^1
Matrix: Water
Analysis Batch: 321660

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0537		mg/L		107	80 - 120
Barium	0.0500	0.0476		mg/L		95	80 - 120
Beryllium	0.0500	0.0540		mg/L		108	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Calcium	5.00	4.86		mg/L		97	80 - 120
Chromium	0.0500	0.0500		mg/L		100	80 - 120
Cobalt	0.0500	0.0515		mg/L		103	80 - 120
Lead	0.0500	0.0499		mg/L		100	80 - 120
Molybdenum	0.0500	0.0499		mg/L		100	80 - 120
Selenium	0.0500	0.0504		mg/L		101	80 - 120
Lithium	0.0500	0.0561		mg/L		112	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

Lab Sample ID: LCS 400-321454/2-A ^1
Matrix: Water
Analysis Batch: 321877

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.0500	0.0536		mg/L		107	80 - 120
Antimony	0.0500	0.0527		mg/L		105	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-126512-3 MS
Matrix: Water
Analysis Batch: 321660

Client Sample ID: GWA-4
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	<0.00046		0.0500	0.0551		mg/L		110	75 - 125
Barium	0.041		0.0500	0.0914		mg/L		101	75 - 125
Beryllium	<0.00034		0.0500	0.0543		mg/L		109	75 - 125
Boron	<0.021	F1	0.100	0.137	F1	mg/L		137	75 - 125
Calcium	0.88		5.00	5.93		mg/L		101	75 - 125
Chromium	<0.0011		0.0500	0.0510		mg/L		102	75 - 125
Cobalt	0.00055	J	0.0500	0.0534		mg/L		106	75 - 125
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125
Molybdenum	<0.00085		0.0500	0.0502		mg/L		100	75 - 125
Selenium	0.00046	J	0.0500	0.0516		mg/L		102	75 - 125
Lithium	<0.0032		0.0500	0.0564		mg/L		113	75 - 125

Lab Sample ID: 400-126512-3 MSD
Matrix: Water
Analysis Batch: 321660

Client Sample ID: GWA-4
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	<0.00046		0.0500	0.0545		mg/L		109	75 - 125	1	20
Barium	0.041		0.0500	0.0884		mg/L		95	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0545		mg/L		109	75 - 125	0	20
Boron	<0.021	F1	0.100	0.128	F1	mg/L		128	75 - 125	6	20
Calcium	0.88		5.00	5.84		mg/L		99	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0492		mg/L		98	75 - 125	4	20
Cobalt	0.00055	J	0.0500	0.0526		mg/L		104	75 - 125	2	20
Lead	<0.00035		0.0500	0.0504		mg/L		101	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0490		mg/L		98	75 - 125	2	20
Selenium	0.00046	J	0.0500	0.0503		mg/L		100	75 - 125	3	20
Lithium	<0.0032		0.0500	0.0556		mg/L		111	75 - 125	1	20

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

Lab Sample ID: 400-126512-3 MS
Matrix: Water
Analysis Batch: 321877

Client Sample ID: GWA-4
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium - RA	<0.00034		0.0500	0.0549		mg/L		110	75 - 125
Antimony - RA	<0.0010		0.0500	0.0551		mg/L		110	75 - 125
Thallium - RA	<0.00085		0.0100	0.0106		mg/L		106	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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

Lab Sample ID: 400-126512-3 MSD
Matrix: Water
Analysis Batch: 321877

Client Sample ID: GWA-4
Prep Type: Total Recoverable
Prep Batch: 321454

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Cadmium - RA	<0.00034		0.0500	0.0533		mg/L		107	75 - 125	3	20	
Antimony - RA	<0.0010		0.0500	0.0528		mg/L		106	75 - 125	4	20	
Thallium - RA	<0.000085		0.0100	0.0104		mg/L		104	75 - 125	2	20	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-321468/14-A
Matrix: Water
Analysis Batch: 322010

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 321468

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0000792	J	0.00020	0.000070	mg/L		09/06/16 13:39	09/09/16 12:53	1
Mercury, Dissolved	0.0000792	J	0.00020	0.000070	mg/L		09/06/16 13:39	09/09/16 12:53	1

Lab Sample ID: LCS 400-321468/15-A
Matrix: Water
Analysis Batch: 322010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 321468

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	
Mercury	0.00101	0.000963		mg/L		96	80 - 120	
Mercury, Dissolved	0.00101	0.000963		mg/L		96	80 - 120	

Lab Sample ID: 400-126512-4 MS
Matrix: Water
Analysis Batch: 322010

Client Sample ID: GWA-5
Prep Type: Total/NA
Prep Batch: 321468

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	
Mercury	0.000086	J B	0.00201	0.00191		mg/L		91	80 - 120	
Mercury, Dissolved	0.000086	J B	0.00201	0.00191		mg/L		91	80 - 120	

Lab Sample ID: 400-126512-4 MSD
Matrix: Water
Analysis Batch: 322010

Client Sample ID: GWA-5
Prep Type: Total/NA
Prep Batch: 321468

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Mercury	0.000086	J B	0.00201	0.00188		mg/L		89	80 - 120	2	20	
Mercury, Dissolved	0.000086	J B	0.00201	0.00188		mg/L		89	80 - 120	2	20	

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

Lab Sample ID: MB 400-321249/1
Matrix: Water
Analysis Batch: 321249

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			09/02/16 16:55	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
SDG: LF 3 Phase 2

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

Lab Sample ID: LCS 400-321249/2
Matrix: Water
Analysis Batch: 321249

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	288		mg/L		98	78 - 122

Lab Sample ID: 400-126480-C-1 DU
Matrix: Water
Analysis Batch: 321249

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	600		598		mg/L		0.3	5

Lab Sample ID: MB 400-321332/1
Matrix: Water
Analysis Batch: 321332

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			09/03/16 15:45	1

Lab Sample ID: LCS 400-321332/2
Matrix: Water
Analysis Batch: 321332

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	298		mg/L		102	78 - 122

Lab Sample ID: 400-126512-3 DU
Matrix: Water
Analysis Batch: 321332

Client Sample ID: GWA-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	14		14.0		mg/L		0	5

Lab Sample ID: MB 400-321595/1
Matrix: Water
Analysis Batch: 321595

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			09/07/16 11:48	1

Lab Sample ID: LCS 400-321595/2
Matrix: Water
Analysis Batch: 321595

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	250		mg/L		85	78 - 122

Lab Sample ID: 400-126512-6 DU
Matrix: Water
Analysis Batch: 321595

Client Sample ID: GWA-3B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	60		60.0		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-1
 SDG: LF 3 Phase 2

Lab Sample ID: MB 400-321596/1
Matrix: Water
Analysis Batch: 321596

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			09/07/16 13:28	1

Lab Sample ID: LCS 400-321596/2
Matrix: Water
Analysis Batch: 321596

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	320		mg/L		109	78 - 122

Lab Sample ID: 400-126631-G-10 DU
Matrix: Water
Analysis Batch: 321596

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	320		318		mg/L		0.6	5

Lab Sample ID: MB 400-321650/1
Matrix: Water
Analysis Batch: 321650

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			09/07/16 13:21	1

Lab Sample ID: LCS 400-321650/2
Matrix: Water
Analysis Batch: 321650

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: 400-126512-13 DU
Matrix: Water
Analysis Batch: 321650

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	180		182		mg/L		1	5

Lab Sample ID: 400-126512-15 DU
Matrix: Water
Analysis Batch: 321650

Client Sample ID: GWC-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	56		58.0		mg/L		4	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		Lab P#:		Carrier Tracking No(s):	
Client Contact: Joju Abraham		Whitmore, Cherylene R		400-57303-24790.1	
Company: Southern Company		E-Mail: cherylene.whitmore@testamerica.com		Page: 1 of 1	
Address: 241 Ralph McGill Blvd SE B10185		Job #:		COC No:	
City: Atlanta		Analysis Requested		400-57303-24790.1	
State, Zip: GA, 30308		TDS - GM 2540C; Cl/F 504 - EPA 300		Preservation Codes:	
Phone: 404-506-7239		Metals Appendix III & IV - EPA 6020 & EPA 7470		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Email: JAbraham@southernco.com		TDS - GM 226 & 228 - SW-046 9316 & 9320		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Asstone V - MCAA W - ph 4.5 Z - other (specify)	
Project Name: Phase 2 CCR - Plant McIntosh		Matrix (W=water, S=solid, C=water, A=air)		Special Instructions/Note:	
Site: LF 3		Sample Date		Date/Time	
Sample Identification		Sample Type (C=comp, G=grab)		Date/Time	
GW A-3B (Filtered)		G		8/13/16 1355	
Possible Hazard Identification		Matrix		Date/Time	
<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		W		Date/Time	
Deliverable Requested: I, II, III, IV, Other (specify)		W		Date/Time	
Empty Kit Relinquished by:		W		Date/Time	
Relinquished by: <i>William GJP</i>		W		Date/Time	
Relinquished by:		W		Date/Time	
Relinquished by:		W		Date/Time	
Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		W		Date/Time	
Custody Seal No:		W		Date/Time	
Cooler Temperature: °C and Other Parameters:		W		Date/Time	
8.4/0.7 (6) 08/11/16		W		Date/Time	



Chain of Custody Record

Client Information SPM: ERM - W. Virgo Phone: 678-486-2700 E-Mail: cheyenne.whitmire@testamericainc.com		Lab P.M.: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: 400-57303-24790.1 Page: 1 of 1 Job #:	
Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: Phase 2 CCR - Plant McIntosh Site: LF 3		Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SOW#:		Analysis Requested TDS - SM 2540C ; Cl, F, SO4 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 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 - Na2OAS Q - NaZSO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA Z - other (specify)		Special Instructions/Note: Total Number of containers	
Sample Identification GWA-1 (Filtered) GWA-2 (Filtered)	Sample Date 9/1/16 9/1/16	Sample Time 1120 0915	Sample Type (C=Comp, G=grab) G G	Matrix (W=water, S=solid, O=wastefl, BT=Tissue, A=AIT) W W W W W W W W W	Field Filtered Sample (Yes or No) Y Y
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements: Please also supply results to Heath McCorkle and Maria Padilla					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: W. Virgo		Date/Time: 9/2/16 1357		Received by: [Signature] Company: TA	
Relinquished by: [Signature]		Date/Time: 9/2/16 1600		Received by: [Signature] Company: TA	
Relinquished by: [Signature]		Date/Time:		Received by: [Signature] Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature (°C) and other Remarks:					



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-126512-1

SDG Number: LF 3 Phase 2

Login Number: 126512

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	1.0°C, 0.9°C IR-6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	Per client, cancel 1st GWA-3A sample; resampling.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

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

TestAmerica Job ID: 400-126512-1
 SDG: LF 3 Phase 2

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16 *
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
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: 400-126512-2

TestAmerica Sample Delivery Group: LF 3 Phase 2

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:

10/4/2016 1:34:29 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	22
Chronicle	23
QC Association	27
QC Sample Results	29
Chain of Custody	32
Receipt Checklists	38
Certification Summary	39

Case Narrative

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Job ID: 400-126512-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-126512-2

RAD

Method(s) 9320: Radium-228 Prep Batch: 160-268951: The following samples did not meet the Ra-228 detection goal due to the reduced sample volume attributed to matrix interferences (see Prep NCM 160-93875). The data have been qualified and reported. GWA-1 (400-126512-12) and GWA-2 (400-126512-13)

Method(s) PrecSep_0: Radium-228 Prep Batch: 160-268951: The following samples were prepared at a reduced aliquot due to sediment. GWA-1 (400-126512-12) and GWA-2 (400-126512-13) A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium-228 Prep Batch: 160-268951: Insufficient sample volume was available to preform a sample duplicate (DUP) for the following samples: GWA-7 (400-126512-2), GWA-4 (400-126512-3), GWA-5 (400-126512-4), GWA-3A (400-126512-5), GWA-3B (400-126512-6), GWC-2 (400-126512-7), GWC-4A (400-126512-8), GWC-1 (400-126512-9), DUP-1 (400-126512-10), GWA-1 (400-126512-12), GWA-2 (400-126512-13), GWC-3 (400-126512-14), GWC-4B (400-126512-15), FB-1 (400-126512-17) and FERB-1 (400-126512-18). A laboratory control sample/ A laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium-228 Prep Batch: 160-269083: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWC-5 (400-126512-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. The samples were also prepared at a reduced aliquot due to limited volume.

Method(s) PrecSep-21: Radium-226 preparation batch 160-268865: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-7 (400-126512-2), GWA-4 (400-126512-3), GWA-5 (400-126512-4), GWA-3A (400-126512-5), GWA-3B (400-126512-6), GWC-2 (400-126512-7), GWC-4A (400-126512-8), GWC-1 (400-126512-9), DUP-1 (400-126512-10), GWA-1 (400-126512-12), GWC-4B (400-126512-15), FB-1 (400-126512-17) and FERB-1 (400-126512-18). Samples from lot 240-69034 and 240-69035 were measured at 750mL. 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: 160-269082: The following samples was run at reduced aliquot due to limited volume: GWC-5 (400-126512-16).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-268865: The following samples were prepared at a reduced aliquot due to sediment and discoloration: GWA-2 (400-126512-13) and GWC-3 (400-126512-14). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to avoid matrix interference with homogeneity.

Method Summary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-126512-2	GWA-7	Water	08/30/16 15:30	08/30/16 17:47
400-126512-3	GWA-4	Water	08/31/16 09:50	09/01/16 11:00
400-126512-4	GWA-5	Water	08/31/16 12:00	09/01/16 11:00
400-126512-5	GWA-3A	Water	08/31/16 12:55	09/01/16 11:00
400-126512-6	GWA-3B	Water	08/31/16 13:55	09/01/16 11:00
400-126512-7	GWC-2	Water	08/31/16 14:55	09/01/16 11:00
400-126512-8	GWC-4A	Water	08/31/16 15:40	09/01/16 11:00
400-126512-9	GWC-1	Water	08/31/16 16:15	09/01/16 11:00
400-126512-10	DUP-1	Water	08/31/16 00:00	09/01/16 11:00
400-126512-12	GWA-1	Water	09/01/16 11:20	09/03/16 09:32
400-126512-13	GWA-2	Water	09/01/16 09:15	09/03/16 09:32
400-126512-14	GWC-3	Water	09/01/16 10:15	09/03/16 09:32
400-126512-15	GWC-4B	Water	09/01/16 13:10	09/03/16 09:32
400-126512-16	GWC-5	Water	09/01/16 12:45	09/03/16 09:32
400-126512-17	FB-1	Water	09/01/16 15:10	09/03/16 09:32
400-126512-18	FERB-1	Water	09/01/16 15:20	09/03/16 09:32

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWA-7
Date Collected: 08/30/16 15:30
Date Received: 08/30/16 17:47

Lab Sample ID: 400-126512-2
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	0.235		0.0816	0.0843	1.00	0.0973	pCi/L	09/09/16 15:43	10/03/16 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					09/09/16 15:43	10/03/16 10:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.000	U	0.228	0.228	1.00	0.410	pCi/L	09/09/16 16:04	09/21/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					09/09/16 16:04	09/21/16 17:31	1
Y Carrier	94.6		40 - 110					09/09/16 16:04	09/21/16 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	0.235	U	0.243	0.243	5.00	0.410	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWA-4
Date Collected: 08/31/16 09:50
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-3
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	0.256		0.0737	0.0772	1.00	0.0692	pCi/L	09/09/16 15:43	10/03/16 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					09/09/16 15:43	10/03/16 10:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.303	U	0.268	0.269	1.00	0.428	pCi/L	09/09/16 16:04	09/21/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					09/09/16 16:04	09/21/16 17:31	1
Y Carrier	81.5		40 - 110					09/09/16 16:04	09/21/16 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	0.558		0.278	0.280	5.00	0.428	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Client Sample ID: GWA-5
Date Collected: 08/31/16 12:00
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-4
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	0.723		0.113	0.131	1.00	0.0653	pCi/L	09/09/16 15:43	10/03/16 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/09/16 15:43	10/03/16 10:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.787		0.351	0.358	1.00	0.508	pCi/L	09/09/16 16:04	09/21/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/09/16 16:04	09/21/16 17:31	1
Y Carrier	79.3		40 - 110					09/09/16 16:04	09/21/16 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	1.51		0.369	0.381	5.00	0.508	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWA-3A

Lab Sample ID: 400-126512-5

Date Collected: 08/31/16 12:55

Matrix: Water

Date Received: 09/01/16 11:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.359		0.0810	0.0872	1.00	0.0586	pCi/L	09/09/16 15:43	10/03/16 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					09/09/16 15:43	10/03/16 10:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.614		0.281	0.287	1.00	0.403	pCi/L	09/09/16 16:04	09/21/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					09/09/16 16:04	09/21/16 17:31	1
Y Carrier	83.0		40 - 110					09/09/16 16:04	09/21/16 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	0.973		0.293	0.300	5.00	0.403	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWA-3B

Lab Sample ID: 400-126512-6

Date Collected: 08/31/16 13:55

Matrix: Water

Date Received: 09/01/16 11:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.184		0.0723	0.0742	1.00	0.0854	pCi/L	09/09/16 15:43	10/03/16 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.2		40 - 110					09/09/16 15:43	10/03/16 10:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.158	U	0.397	0.397	1.00	0.678	pCi/L	09/09/16 16:04	09/21/16 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.2		40 - 110					09/09/16 16:04	09/21/16 17:31	1
Y Carrier	83.0		40 - 110					09/09/16 16:04	09/21/16 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	0.341	U	0.403	0.404	5.00	0.678	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWC-2
Date Collected: 08/31/16 14:55
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-7
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	0.418		0.0911	0.0986	1.00	0.0731	pCi/L	09/09/16 15:43	10/03/16 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					09/09/16 15:43	10/03/16 10:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.687		0.375	0.381	1.00	0.573	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	82.6		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.10		0.386	0.393	5.00	0.573	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWC-4A

Lab Sample ID: 400-126512-8

Date Collected: 08/31/16 15:40

Matrix: Water

Date Received: 09/01/16 11:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.491		0.101	0.111	1.00	0.0885	pCi/L	09/09/16 15:43	10/03/16 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					09/09/16 15:43	10/03/16 10:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.697		0.326	0.332	1.00	0.475	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	82.2		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.19		0.341	0.350	5.00	0.475	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWC-1
Date Collected: 08/31/16 16:15
Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-9
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	0.258		0.0761	0.0795	1.00	0.0772	pCi/L	09/09/16 15:43	10/03/16 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					09/09/16 15:43	10/03/16 10:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.113	U	0.296	0.296	1.00	0.509	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	83.4		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.371	U	0.306	0.307	5.00	0.509	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: DUP-1

Date Collected: 08/31/16 00:00

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-10

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	0.543		0.110	0.120	1.00	0.0986	pCi/L	09/09/16 15:43	10/03/16 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					09/09/16 15:43	10/03/16 10:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.432	U	0.354	0.357	1.00	0.567	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	83.0		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.975		0.371	0.376	5.00	0.567	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWA-1
Date Collected: 09/01/16 11:20
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-12
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	4.09		0.759	0.844	1.00	0.589	pCi/L	09/09/16 15:43	10/01/16 22:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	42.2		40 - 110					09/09/16 15:43	10/01/16 22:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.77	U G	2.33	2.35	1.00	3.72	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	42.2		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	83.0		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.86		2.45	2.50	5.00	3.72	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWA-2
Date Collected: 09/01/16 09:15
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-13
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	0.463		0.239	0.242	1.00	0.314	pCi/L	09/09/16 15:43	10/01/16 22:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					09/09/16 15:43	10/01/16 22:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.87	U G	1.29	1.30	1.00	2.01	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	86.7		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.34		1.31	1.32	5.00	2.01	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWC-3

Date Collected: 09/01/16 10:15

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-14

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	0.246		0.0733	0.0766	1.00	0.0721	pCi/L	09/09/16 15:43	10/02/16 20:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					09/09/16 15:43	10/02/16 20:31	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.108	U	0.303	0.303	1.00	0.522	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	80.7		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.355	U	0.311	0.312	5.00	0.522	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWC-4B

Date Collected: 09/01/16 13:10

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-15

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	0.258		0.0718	0.0755	1.00	0.0636	pCi/L	09/09/16 15:43	10/02/16 20:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					09/09/16 15:43	10/02/16 20:31	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.396	U	0.292	0.294	1.00	0.457	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	78.9		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.654		0.301	0.304	5.00	0.457	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: GWC-5
Date Collected: 09/01/16 12:45
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-16
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	4.85		0.360	0.566	1.00	0.118	pCi/L	09/11/16 20:20	10/03/16 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					09/11/16 20:20	10/03/16 11:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.33		0.617	0.734	1.00	0.546	pCi/L	09/11/16 20:40	09/23/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					09/11/16 20:40	09/23/16 17:16	1
Y Carrier	81.9		40 - 110					09/11/16 20:40	09/23/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	9.18		0.714	0.927	5.00	0.546	pCi/L		10/04/16 02:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

Client Sample ID: FB-1
Date Collected: 09/01/16 15:10
Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-17
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	0.0172	U	0.0386	0.0387	1.00	0.0693	pCi/L	09/09/16 15:43	10/02/16 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					09/09/16 15:43	10/02/16 20:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.296	U	0.286	0.288	1.00	0.464	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	84.5		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.313	U	0.289	0.290	5.00	0.464	pCi/L		10/04/16 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Client Sample ID: FERB-1

Date Collected: 09/01/16 15:20

Date Received: 09/03/16 09:32

Lab Sample ID: 400-126512-18

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	0.0210	U	0.0402	0.0403	1.00	0.0711	pCi/L	09/09/16 15:43	10/02/16 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/09/16 15:43	10/02/16 20:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.112	U	0.248	0.248	1.00	0.426	pCi/L	09/09/16 16:04	09/21/16 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					09/09/16 16:04	09/21/16 17:26	1
Y Carrier	80.7		40 - 110					09/09/16 16:04	09/21/16 17:26	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.133	U	0.251	0.251	5.00	0.426	pCi/L		10/04/16 10:31	1

Definitions/Glossary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Client Sample ID: GWA-7

Date Collected: 08/30/16 15:30

Date Received: 08/30/16 17:47

Lab Sample ID: 400-126512-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270875	09/21/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWA-4

Date Collected: 08/31/16 09:50

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270875	09/21/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWA-5

Date Collected: 08/31/16 12:00

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270875	09/21/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWA-3A

Date Collected: 08/31/16 12:55

Date Received: 09/01/16 11:00

Lab Sample ID: 400-126512-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270875	09/21/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Client Sample ID: GWA-3B

Lab Sample ID: 400-126512-6

Date Collected: 08/31/16 13:55

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270875	09/21/16 17:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWC-2

Lab Sample ID: 400-126512-7

Date Collected: 08/31/16 14:55

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWC-4A

Lab Sample ID: 400-126512-8

Date Collected: 08/31/16 15:40

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-126512-9

Date Collected: 08/31/16 16:15

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Client Sample ID: DUP-1

Lab Sample ID: 400-126512-10

Date Collected: 08/31/16 00:00

Matrix: Water

Date Received: 09/01/16 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272746	10/03/16 10:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWA-1

Lab Sample ID: 400-126512-12

Date Collected: 09/01/16 11:20

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272615	10/01/16 22:47	ALS	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWA-2

Lab Sample ID: 400-126512-13

Date Collected: 09/01/16 09:15

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272615	10/01/16 22:48	ALS	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWC-3

Lab Sample ID: 400-126512-14

Date Collected: 09/01/16 10:15

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272622	10/02/16 20:31	ALS	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Client Sample ID: GWC-4B

Lab Sample ID: 400-126512-15

Date Collected: 09/01/16 13:10

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272622	10/02/16 20:31	ALS	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: GWC-5

Lab Sample ID: 400-126512-16

Date Collected: 09/01/16 12:45

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269082	09/11/16 20:20	TJT	TAL SL
Total/NA	Analysis	9315		1	272747	10/03/16 11:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269083	09/11/16 20:40	TJT	TAL SL
Total/NA	Analysis	9320		1	271334	09/23/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	272837	10/04/16 02:31	ALS	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-126512-17

Date Collected: 09/01/16 15:10

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272622	10/02/16 20:32	ALS	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-126512-18

Date Collected: 09/01/16 15:20

Matrix: Water

Date Received: 09/03/16 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			268865	09/09/16 15:43	MCJ	TAL SL
Total/NA	Analysis	9315		1	272622	10/02/16 20:32	ALS	TAL SL
Total/NA	Prep	PrecSep_0			268951	09/09/16 16:04	MCJ	TAL SL
Total/NA	Analysis	9320		1	270869	09/21/16 17:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273093	10/04/16 10:31	CAH	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Rad

Prep Batch: 268865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total/NA	Water	PrecSep-21	
400-126512-3	GWA-4	Total/NA	Water	PrecSep-21	
400-126512-4	GWA-5	Total/NA	Water	PrecSep-21	
400-126512-5	GWA-3A	Total/NA	Water	PrecSep-21	
400-126512-6	GWA-3B	Total/NA	Water	PrecSep-21	
400-126512-7	GWC-2	Total/NA	Water	PrecSep-21	
400-126512-8	GWC-4A	Total/NA	Water	PrecSep-21	
400-126512-9	GWC-1	Total/NA	Water	PrecSep-21	
400-126512-10	DUP-1	Total/NA	Water	PrecSep-21	
400-126512-12	GWA-1	Total/NA	Water	PrecSep-21	
400-126512-13	GWA-2	Total/NA	Water	PrecSep-21	
400-126512-14	GWC-3	Total/NA	Water	PrecSep-21	
400-126512-15	GWC-4B	Total/NA	Water	PrecSep-21	
400-126512-17	FB-1	Total/NA	Water	PrecSep-21	
400-126512-18	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-268865/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-268865/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-268865/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 268951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-2	GWA-7	Total/NA	Water	PrecSep_0	
400-126512-3	GWA-4	Total/NA	Water	PrecSep_0	
400-126512-4	GWA-5	Total/NA	Water	PrecSep_0	
400-126512-5	GWA-3A	Total/NA	Water	PrecSep_0	
400-126512-6	GWA-3B	Total/NA	Water	PrecSep_0	
400-126512-7	GWC-2	Total/NA	Water	PrecSep_0	
400-126512-8	GWC-4A	Total/NA	Water	PrecSep_0	
400-126512-9	GWC-1	Total/NA	Water	PrecSep_0	
400-126512-10	DUP-1	Total/NA	Water	PrecSep_0	
400-126512-12	GWA-1	Total/NA	Water	PrecSep_0	
400-126512-13	GWA-2	Total/NA	Water	PrecSep_0	
400-126512-14	GWC-3	Total/NA	Water	PrecSep_0	
400-126512-15	GWC-4B	Total/NA	Water	PrecSep_0	
400-126512-17	FB-1	Total/NA	Water	PrecSep_0	
400-126512-18	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-268951/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-268951/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-268951/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 269082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-16	GWC-5	Total/NA	Water	PrecSep-21	
MB 160-269082/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-269082/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-269082/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 269083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126512-16	GWC-5	Total/NA	Water	PrecSep_0	
MB 160-269083/1-A	Method Blank	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Rad (Continued)

Prep Batch: 269083 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-269083/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-269083/3-A	Lab Control Sample Dup	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: 400-126512-2
SDG: LF 3 Phase 2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-268865/1-A
Matrix: Water
Analysis Batch: 272616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 268865

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05688	U	0.0701	0.0703	1.00	0.116	pCi/L	09/09/16 15:43	10/01/16 22:36	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.9		40 - 110					09/09/16 15:43	10/01/16 22:36	1

Lab Sample ID: LCS 160-268865/2-A
Matrix: Water
Analysis Batch: 272616

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 268865

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	14.22		1.38	1.00	0.0726	pCi/L	128	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	76.4		40 - 110						

Lab Sample ID: LCSD 160-268865/3-A
Matrix: Water
Analysis Batch: 272616

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 268865

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	13.92		1.35	1.00	0.101	pCi/L	125	68 - 137	0.11	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	78.1		40 - 110								

Lab Sample ID: MB 160-269082/1-A
Matrix: Water
Analysis Batch: 272742

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 269082

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02135	U	0.0652	0.0653	1.00	0.121	pCi/L	09/11/16 19:46	10/03/16 10:59	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/11/16 19:46	10/03/16 10:59	1

Lab Sample ID: LCS 160-269082/2-A
Matrix: Water
Analysis Batch: 272742

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 269082

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	14.8	17.91		1.75	1.00	0.112	pCi/L	121	68 - 137

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

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

Lab Sample ID: LCS 160-269082/2-A
Matrix: Water
Analysis Batch: 272742

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 269082

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.9		40 - 110

Lab Sample ID: LCSD 160-269082/3-A
Matrix: Water
Analysis Batch: 272742

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 269082

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	14.8	19.19		1.87	1.00	0.104	pCi/L	130	68 - 137	0.35	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	84.6		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-268951/1-A
Matrix: Water
Analysis Batch: 270875

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 268951

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4217	U	0.300	0.302	1.00	0.465	pCi/L	09/09/16 16:04	09/21/16 17:30	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	72.9		40 - 110	09/09/16 16:04	09/21/16 17:30	1
Y Carrier	85.2		40 - 110	09/09/16 16:04	09/21/16 17:30	1

Lab Sample ID: LCS 160-268951/2-A
Matrix: Water
Analysis Batch: 270875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 268951

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.5	16.05		1.78	1.00	0.470	pCi/L	110	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	76.4		40 - 110
Y Carrier	80.7		40 - 110

Lab Sample ID: LCSD 160-268951/3-A
Matrix: Water
Analysis Batch: 270875

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 268951

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.5	16.71		1.84	1.00	0.514	pCi/L	115	56 - 140	0.18	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-126512-2
 SDG: LF 3 Phase 2

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

Lab Sample ID: LCSD 160-268951/3-A
Matrix: Water
Analysis Batch: 270875

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 268951

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	78.1		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: MB 160-269083/1-A
Matrix: Water
Analysis Batch: 271445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 269083

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3915	U	0.353	0.355	1.00	0.568	pCi/L	09/11/16 20:40	09/23/16 17:12	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110	09/11/16 20:40	09/23/16 17:12	1
Y Carrier	91.2		40 - 110	09/11/16 20:40	09/23/16 17:12	1

Lab Sample ID: LCS 160-269083/2-A
Matrix: Water
Analysis Batch: 271445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 269083

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	19.4	19.42		2.11	1.00	0.577	pCi/L	100	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.9		40 - 110
Y Carrier	91.2		40 - 110

Lab Sample ID: LCSD 160-269083/3-A
Matrix: Water
Analysis Batch: 271445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 269083


Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	19.4	20.74		2.24	1.00	0.571	pCi/L	107	56 - 140	0.30	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	84.6		40 - 110
Y Carrier	88.2		40 - 110

TestAmerica Pensacola
 3365 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: Leju 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: Phase 2 CCR - Plant McIntosh Site: LF 3		Lab Pk: Whitire, Cheyenne R E-Mail: cheyenne.whitire@testamericainc.com Carrier Tracking No(s): Job #: 1091	
Sample Identification Sample ID: GW A -3A Sample Date: 8/29/16 Sample Time: 1535 Sample Type: G Matrix: W		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-646 9315 & 9320 TTB - BM 2840C; Cl, F, SO4 - EPA 300 400-126512 COC QR Code: 	
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/Notes: Total Number of Containers: 2 Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ios J - DI Water K - EDTA L - EDA Other:	
Deliverable Requested: <input type="checkbox"/> 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	
Relinquished by: <i>W. IV. Co. [Signature]</i> Relinquished by: <i>[Signature]</i> Relinquished by:		Received by: <i>[Signature]</i> Received by: <i>[Signature]</i> Received by:	
Empty Kit Relinquished by:		Method of Shipment: 19/2-3	
Date/Time: 8/30/16 0926		Date/Time: 8-30-16 9:26	
Date/Time:		Date/Time:	
Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> A, Yes <input type="checkbox"/> No		Cooler Temperature(s): °C and Other:	



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		Lab P#:		Carrier Tracking No(s):	
Client Contact: Joju Abraham		Whitmore, Cherylene R		400-57303-24790.1	
Company: Southern Company		E-Mail: cherylene.whitmore@testamericainc.com		Page: 1 of 1	
Address: 241 Ralph McGill Blvd SE B10185		City: Atlanta		Job #:	
State, Zip: GA, 30308		Phone: 404-506-7239		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:	
Project Name: Phase 2 CCR - Plant McIntosh		Project #:		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Asstorie V - MCAA W - ph 4.5 Z - other (specify)	
Site: LF 3		SSOW#:		Special Instructions/Note:	
Sample Identification		Sample Date		Date/Time	
GW A-3B (Filtered)		8/13/16 1355		8/13/16 11:00	
Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Date/Time	
G		W		11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	
G		EPM		08/16/16 11:00	
Sample Time		Company		Date/Time	
1355		EPM		08/16/16 0600	
Sample Date		Company		Date/Time	
8/13/16 1355		EPM		08/16/16 11:00	
Matrix (W=water, S=solid, C=water, I=ice, M=metal, A=air)		Company		Date/Time	
W		EPM		08/16/16 0600	
Sample Type (C=comp, G=grab)		Company		Date/Time	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-126512-2

SDG Number: LF 3 Phase 2

Login Number: 126512

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	1.0°C, 0.9°C IR-6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	Per client, cancel 1st GWA-3A sample; resampling.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-16 *
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-126512-2
SDG: LF 3 Phase 2

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16 *
Texas	NELAP	6	T104704193-16-10	07-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-16 *

* 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: 400-131603-1

TestAmerica Sample Delivery Group: LF 3

Client Project/Site: CCR - Plant McIntosh

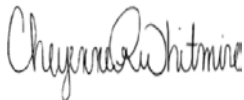
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

1/4/2017 5:18:22 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	9
Chronicle	10
QC Association	11
QC Sample Results	12
Chain of Custody	16
Receipt Checklists	17
Certification Summary	18

Case Narrative

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

TestAmerica Job ID: 400-131603-1
SDG: LF 3

Job ID: 400-131603-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-131603-1

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 336869 and analytical batch 337019 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-131603-1
 SDG: LF 3

Client Sample ID: GWA-1 (FILTERED)

Lab Sample ID: 400-131603-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium, Dissolved	0.0064		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	1.4		0.25	0.13	mg/L	5		6020	Dissolved
Chromium, Dissolved	0.0057		0.0025	0.0011	mg/L	5		6020	Dissolved
Cobalt, Dissolved	0.00046	J	0.0025	0.00040	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.00032	J	0.0013	0.00024	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.0076		0.0050	0.0032	mg/L	5		6020	Dissolved

Client Sample ID: GWA-1

Lab Sample ID: 400-131603-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00047	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.054		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00048	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	0.010		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0027		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0082		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00037	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.000090	J	0.00050	0.000085	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: 400-131603-1
SDG: LF 3

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN

Protocol References:

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: 400-131603-1
SDG: LF 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-131603-1	GWA-1 (FILTERED)	Water	12/15/16 09:25	12/15/16 11:24
400-131603-2	GWA-1	Water	12/15/16 09:25	12/15/16 11:24

- 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: 400-131603-1
 SDG: LF 3

Client Sample ID: GWA-1 (FILTERED)

Lab Sample ID: 400-131603-1

Date Collected: 12/15/16 09:25

Matrix: Water

Date Received: 12/15/16 11:24

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		12/29/16 13:16	12/30/16 14:51	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		12/29/16 13:16	12/30/16 14:51	5
Barium, Dissolved	0.0064		0.0025	0.00049	mg/L		12/29/16 13:16	12/30/16 14:51	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:51	5
Calcium, Dissolved	1.4		0.25	0.13	mg/L		12/29/16 13:16	12/30/16 14:51	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:51	5
Chromium, Dissolved	0.0057		0.0025	0.0011	mg/L		12/29/16 13:16	12/30/16 14:51	5
Cobalt, Dissolved	0.00046 J		0.0025	0.00040	mg/L		12/29/16 13:16	12/30/16 14:51	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		12/29/16 13:16	12/30/16 14:51	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		12/29/16 13:16	12/30/16 14:51	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		12/29/16 13:16	12/30/16 14:51	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		12/29/16 13:16	12/30/16 14:51	5
Selenium, Dissolved	0.00032 J		0.0013	0.00024	mg/L		12/29/16 13:16	12/30/16 14:51	5
Lithium, Dissolved	0.0076		0.0050	0.0032	mg/L		12/29/16 13:16	12/30/16 14:51	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		12/30/16 11:30	01/03/17 11:00	1

Client Sample Results

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

TestAmerica Job ID: 400-131603-1
 SDG: LF 3

Client Sample ID: GWA-1
Date Collected: 12/15/16 09:25
Date Received: 12/15/16 11:24

Lab Sample ID: 400-131603-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/29/16 13:16	12/30/16 14:56	5
Arsenic	0.00047	J	0.0013	0.00046	mg/L		12/29/16 13:16	12/30/16 14:56	5
Barium	0.054		0.0025	0.00049	mg/L		12/29/16 13:16	12/30/16 14:56	5
Beryllium	0.00048	J	0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:56	5
Boron	<0.021	F1	0.050	0.021	mg/L		12/29/16 13:16	12/30/16 14:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:56	5
Calcium	2.0		0.25	0.13	mg/L		12/29/16 13:16	12/30/16 14:56	5
Chromium	0.010		0.0025	0.0011	mg/L		12/29/16 13:16	12/30/16 14:56	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		12/29/16 13:16	12/30/16 14:56	5
Lead	0.0027		0.0013	0.00035	mg/L		12/29/16 13:16	12/30/16 14:56	5
Lithium	0.0082		0.0050	0.0032	mg/L		12/29/16 13:16	12/30/16 14:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		12/29/16 13:16	12/30/16 14:56	5
Selenium	0.00037	J	0.0013	0.00024	mg/L		12/29/16 13:16	12/30/16 14:56	5
Thallium	0.000090	J	0.00050	0.000085	mg/L		12/29/16 13:16	12/30/16 14:56	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/30/16 11:30	01/03/17 11:01	1

Definitions/Glossary

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

TestAmerica Job ID: 400-131603-1
SDG: LF 3

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

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: 400-131603-1
SDG: LF 3

Client Sample ID: GWA-1 (FILTERED)

Lab Sample ID: 400-131603-1

Date Collected: 12/15/16 09:25

Matrix: Water

Date Received: 12/15/16 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			336869	12/29/16 13:16	KWN	TAL PEN
Dissolved	Analysis	6020		5	337019	12/30/16 14:51	DRE	TAL PEN
Dissolved	Prep	7470A			336886	12/30/16 11:30	DN1	TAL PEN
Dissolved	Analysis	7470A		1	337202	01/03/17 11:00	JAP	TAL PEN

Client Sample ID: GWA-1

Lab Sample ID: 400-131603-2

Date Collected: 12/15/16 09:25

Matrix: Water

Date Received: 12/15/16 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			336869	12/29/16 13:16	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	337019	12/30/16 14:56	DRE	TAL PEN
Total/NA	Prep	7470A			336886	12/30/16 11:30	DN1	TAL PEN
Total/NA	Analysis	7470A		1	337202	01/03/17 11:01	JAP	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: 400-131603-1
SDG: LF 3

Metals

Prep Batch: 336869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-131603-1	GWA-1 (FILTERED)	Dissolved	Water	3005A	
400-131603-2	GWA-1	Total Recoverable	Water	3005A	
MB 400-336869/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-336869/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-131603-2 MS	GWA-1	Total Recoverable	Water	3005A	
400-131603-2 MSD	GWA-1	Total Recoverable	Water	3005A	

Prep Batch: 336886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-131603-1	GWA-1 (FILTERED)	Dissolved	Water	7470A	
400-131603-2	GWA-1	Total/NA	Water	7470A	
MB 400-336886/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-336886/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-131678-C-2-C MS	Matrix Spike	Total/NA	Water	7470A	
400-131678-C-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 337019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-131603-1	GWA-1 (FILTERED)	Dissolved	Water	6020	336869
400-131603-2	GWA-1	Total Recoverable	Water	6020	336869
MB 400-336869/1-A ^5	Method Blank	Total Recoverable	Water	6020	336869
LCS 400-336869/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	336869
400-131603-2 MS	GWA-1	Total Recoverable	Water	6020	336869
400-131603-2 MSD	GWA-1	Total Recoverable	Water	6020	336869

Analysis Batch: 337202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-131603-1	GWA-1 (FILTERED)	Dissolved	Water	7470A	336886
400-131603-2	GWA-1	Total/NA	Water	7470A	336886
MB 400-336886/14-A	Method Blank	Total/NA	Water	7470A	336886
LCS 400-336886/15-A	Lab Control Sample	Total/NA	Water	7470A	336886
400-131678-C-2-C MS	Matrix Spike	Total/NA	Water	7470A	336886
400-131678-C-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	336886

QC Sample Results

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

TestAmerica Job ID: 400-131603-1
SDG: LF 3

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-336869/1-A ^5
Matrix: Water
Analysis Batch: 337019

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 336869

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		12/29/16 13:16	12/30/16 14:42	5
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		12/29/16 13:16	12/30/16 14:42	5
Barium	<0.00049		0.0025	0.00049	mg/L		12/29/16 13:16	12/30/16 14:42	5
Barium, Dissolved	<0.00049		0.0025	0.00049	mg/L		12/29/16 13:16	12/30/16 14:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:42	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:42	5
Boron	<0.021		0.050	0.021	mg/L		12/29/16 13:16	12/30/16 14:42	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		12/29/16 13:16	12/30/16 14:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:42	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		12/29/16 13:16	12/30/16 14:42	5
Calcium	<0.13		0.25	0.13	mg/L		12/29/16 13:16	12/30/16 14:42	5
Calcium, Dissolved	<0.13		0.25	0.13	mg/L		12/29/16 13:16	12/30/16 14:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/29/16 13:16	12/30/16 14:42	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		12/29/16 13:16	12/30/16 14:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/29/16 13:16	12/30/16 14:42	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		12/29/16 13:16	12/30/16 14:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/29/16 13:16	12/30/16 14:42	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		12/29/16 13:16	12/30/16 14:42	5
Antimony	<0.0010		0.0025	0.0010	mg/L		12/29/16 13:16	12/30/16 14:42	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		12/29/16 13:16	12/30/16 14:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		12/29/16 13:16	12/30/16 14:42	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		12/29/16 13:16	12/30/16 14:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		12/29/16 13:16	12/30/16 14:42	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		12/29/16 13:16	12/30/16 14:42	5
Lithium	<0.0032		0.0050	0.0032	mg/L		12/29/16 13:16	12/30/16 14:42	5
Lithium, Dissolved	<0.0032		0.0050	0.0032	mg/L		12/29/16 13:16	12/30/16 14:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/29/16 13:16	12/30/16 14:42	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		12/29/16 13:16	12/30/16 14:42	5

Lab Sample ID: LCS 400-336869/2-A ^1
Matrix: Water
Analysis Batch: 337019

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 336869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0526		mg/L		105	80 - 120
Arsenic, Dissolved	0.0500	0.0526		mg/L		105	80 - 120
Barium	0.0500	0.0525		mg/L		105	80 - 120
Barium, Dissolved	0.0500	0.0525		mg/L		105	80 - 120
Beryllium	0.0500	0.0486		mg/L		97	80 - 120
Beryllium, Dissolved	0.0500	0.0486		mg/L		97	80 - 120
Boron	0.100	0.101		mg/L		101	80 - 120
Boron, Dissolved	0.100	0.101		mg/L		101	80 - 120
Cadmium	0.0500	0.0521		mg/L		104	80 - 120
Cadmium, Dissolved	0.0500	0.0521		mg/L		104	80 - 120
Calcium	5.00	5.07		mg/L		101	80 - 120
Calcium, Dissolved	5.00	5.07		mg/L		101	80 - 120
Chromium	0.0500	0.0510		mg/L		102	80 - 120
Chromium, Dissolved	0.0500	0.0510		mg/L		102	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-131603-1
SDG: LF 3

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

Lab Sample ID: LCS 400-336869/2-A ^1
Matrix: Water
Analysis Batch: 337019

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 336869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Cobalt	0.0500	0.0517		mg/L		103	80 - 120	
Cobalt, Dissolved	0.0500	0.0517		mg/L		103	80 - 120	
Lead	0.0500	0.0507		mg/L		101	80 - 120	
Lead, Dissolved	0.0500	0.0507		mg/L		101	80 - 120	
Antimony	0.0500	0.0520		mg/L		104	80 - 120	
Antimony, Dissolved	0.0500	0.0520		mg/L		104	80 - 120	
Molybdenum	0.0500	0.0510		mg/L		102	80 - 120	
Molybdenum, Dissolved	0.0500	0.0510		mg/L		102	80 - 120	
Selenium	0.0500	0.0507		mg/L		101	80 - 120	
Selenium, Dissolved	0.0500	0.0507		mg/L		101	80 - 120	
Lithium	0.0500	0.0520		mg/L		104	80 - 120	
Lithium, Dissolved	0.0500	0.0520		mg/L		104	80 - 120	
Thallium	0.0100	0.0103		mg/L		103	80 - 120	
Thallium, Dissolved	0.0100	0.0103		mg/L		103	80 - 120	

Lab Sample ID: 400-131603-2 MS
Matrix: Water
Analysis Batch: 337019

Client Sample ID: GWA-1
Prep Type: Total Recoverable
Prep Batch: 336869

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	
Arsenic	0.00047	J	0.0500	0.0531		mg/L		105	75 - 125	
Arsenic, Dissolved	0.00047	J	0.0500	0.0531		mg/L		105	75 - 125	
Barium	0.054		0.0500	0.103		mg/L		98	75 - 125	
Barium, Dissolved	0.054		0.0500	0.103		mg/L		98	75 - 125	
Beryllium	0.00048	J	0.0500	0.0498		mg/L		99	75 - 125	
Beryllium, Dissolved	0.00048	J	0.0500	0.0498		mg/L		99	75 - 125	
Boron	<0.021	F1	0.100	0.126	F1	mg/L		126	75 - 125	
Boron, Dissolved	<0.021	F1	0.100	0.126	F1	mg/L		126	75 - 125	
Cadmium	<0.00034		0.0500	0.0533		mg/L		107	75 - 125	
Cadmium, Dissolved	<0.00034		0.0500	0.0533		mg/L		107	75 - 125	
Calcium	2.0		5.00	7.19		mg/L		104	75 - 125	
Calcium, Dissolved	2.0		5.00	7.19		mg/L		104	75 - 125	
Chromium	0.010		0.0500	0.0618		mg/L		104	75 - 125	
Chromium, Dissolved	0.010		0.0500	0.0618		mg/L		104	75 - 125	
Cobalt	0.0011	J	0.0500	0.0539		mg/L		106	75 - 125	
Cobalt, Dissolved	0.0011	J	0.0500	0.0539		mg/L		106	75 - 125	
Lead	0.0027		0.0500	0.0528		mg/L		100	75 - 125	
Lead, Dissolved	0.0027		0.0500	0.0528		mg/L		100	75 - 125	
Antimony	<0.0010		0.0500	0.0467		mg/L		93	75 - 125	
Antimony, Dissolved	<0.0010		0.0500	0.0467		mg/L		93	75 - 125	
Molybdenum	<0.00085		0.0500	0.0487		mg/L		97	75 - 125	
Molybdenum, Dissolved	<0.00085		0.0500	0.0487		mg/L		97	75 - 125	
Selenium	0.00037	J	0.0500	0.0507		mg/L		101	75 - 125	
Selenium, Dissolved	0.00037	J	0.0500	0.0507		mg/L		101	75 - 125	
Lithium	0.0082		0.0500	0.0611		mg/L		106	75 - 125	
Lithium, Dissolved	0.0082		0.0500	0.0611		mg/L		106	75 - 125	
Thallium	0.000090	J	0.0100	0.0105		mg/L		104	75 - 125	
Thallium, Dissolved	0.000090	J	0.0100	0.0105		mg/L		104	75 - 125	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-131603-1
SDG: LF 3

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

Lab Sample ID: 400-131603-2 MSD

Matrix: Water

Analysis Batch: 337019

Client Sample ID: GWA-1

Prep Type: Total Recoverable

Prep Batch: 336869

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Arsenic	0.00047	J	0.0500	0.0537		mg/L		107	75 - 125	1	20	
Arsenic, Dissolved	0.00047	J	0.0500	0.0537		mg/L		107	75 - 125	1	20	
Barium	0.054		0.0500	0.104		mg/L		99	75 - 125	1	20	
Barium, Dissolved	0.054		0.0500	0.104		mg/L		99	75 - 125	1	20	
Beryllium	0.00048	J	0.0500	0.0501		mg/L		99	75 - 125	1	20	
Beryllium, Dissolved	0.00048	J	0.0500	0.0501		mg/L		99	75 - 125	1	20	
Boron	<0.021	F1	0.100	0.122		mg/L		122	75 - 125	3	20	
Boron, Dissolved	<0.021	F1	0.100	0.122		mg/L		122	75 - 125	3	20	
Cadmium	<0.00034		0.0500	0.0526		mg/L		105	75 - 125	1	20	
Cadmium, Dissolved	<0.00034		0.0500	0.0526		mg/L		105	75 - 125	1	20	
Calcium	2.0		5.00	7.25		mg/L		106	75 - 125	1	20	
Calcium, Dissolved	2.0		5.00	7.25		mg/L		106	75 - 125	1	20	
Chromium	0.010		0.0500	0.0630		mg/L		106	75 - 125	2	20	
Chromium, Dissolved	0.010		0.0500	0.0630		mg/L		106	75 - 125	2	20	
Cobalt	0.0011	J	0.0500	0.0542		mg/L		106	75 - 125	0	20	
Cobalt, Dissolved	0.0011	J	0.0500	0.0542		mg/L		106	75 - 125	0	20	
Lead	0.0027		0.0500	0.0538		mg/L		102	75 - 125	2	20	
Lead, Dissolved	0.0027		0.0500	0.0538		mg/L		102	75 - 125	2	20	
Antimony	<0.0010		0.0500	0.0448		mg/L		90	75 - 125	4	20	
Antimony, Dissolved	<0.0010		0.0500	0.0448		mg/L		90	75 - 125	4	20	
Molybdenum	<0.00085		0.0500	0.0489		mg/L		98	75 - 125	0	20	
Molybdenum, Dissolved	<0.00085		0.0500	0.0489		mg/L		98	75 - 125	0	20	
Selenium	0.00037	J	0.0500	0.0510		mg/L		101	75 - 125	1	20	
Selenium, Dissolved	0.00037	J	0.0500	0.0510		mg/L		101	75 - 125	1	20	
Lithium	0.0082		0.0500	0.0630		mg/L		110	75 - 125	3	20	
Lithium, Dissolved	0.0082		0.0500	0.0630		mg/L		110	75 - 125	3	20	
Thallium	0.000090	J	0.0100	0.0106		mg/L		105	75 - 125	1	20	
Thallium, Dissolved	0.000090	J	0.0100	0.0106		mg/L		105	75 - 125	1	20	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-336886/14-A

Matrix: Water

Analysis Batch: 337202

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 336886

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		12/30/16 11:30	01/03/17 10:57	1
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		12/30/16 11:30	01/03/17 10:57	1

Lab Sample ID: LCS 400-336886/15-A

Matrix: Water

Analysis Batch: 337202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 336886

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.00101	0.00104		mg/L		103	80 - 120	
Mercury, Dissolved	0.00101	0.00104		mg/L		103	80 - 120	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-131603-1
 SDG: LF 3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-131678-C-2-C MS
Matrix: Water
Analysis Batch: 337202

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 336886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00190		mg/L		94	80 - 120
Mercury, Dissolved	<0.000070		0.00201	0.00190		mg/L		94	80 - 120

Lab Sample ID: 400-131678-C-2-D MSD
Matrix: Water
Analysis Batch: 337202

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 336886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00200		mg/L		99	80 - 120	5	20
Mercury, Dissolved	<0.000070		0.00201	0.00200		mg/L		99	80 - 120	5	20

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-131603-1

SDG Number: LF 3

Login Number: 131603

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
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: 400-131603-1
 SDG: LF 3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16 *
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16 *
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

* Certification renewal pending - certification considered valid.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-132732-3

TestAmerica Sample Delivery Group: Landfill #3

Client Project/Site: CCR - Plant McIntosh

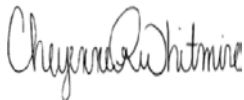
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:38:11 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	8
Chronicle	9
QC Association	10
QC Sample Results	11
Chain of Custody	14
Receipt Checklists	15
Certification Summary	16

Case Narrative

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

Job ID: 400-132732-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132732-3

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 339670 and analytical batch 339805 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The matrix spike duplicate precision (RPD) for the following sample associated with preparation batch 339670 and analytical batch 339805 was outside control limits: (400-132731-C-9-C MSD).

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-132732-3
 SDG: Landfill #3

Client Sample ID: GWA-2A

Lab Sample ID: 400-132732-3

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
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.00060	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.0014		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0028		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Lithium	0.0096		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Calcium	3.3		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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

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: 400-132732-3
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132732-3	GWA-2A	Water	01/18/17 13:00	01/19/17 07:45

- 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: 400-132732-3
SDG: Landfill #3

Client Sample ID: GWA-2A

Lab Sample ID: 400-132732-3

Date Collected: 01/18/17 13:00

Matrix: Water

Date Received: 01/19/17 07:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.89	mg/L			01/27/17 19:26	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 19:26	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 19:26	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		01/25/17 08:40	01/25/17 15:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 15:06	5
Barium	0.042		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 15:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 15:06	5
Cobalt	0.00060	J	0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 15:06	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 15:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 15:06	5
Selenium	0.0014		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 15:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 15:06	5
Vanadium	0.0028		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 15:06	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 15:06	5
Lithium	0.0096		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 15:06	5
Calcium	3.3		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 15:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 15:06	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 15:06	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		01/25/17 09:17	01/27/17 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			01/24/17 14:35	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

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: 400-132732-3
SDG: Landfill #3

Client Sample ID: GWA-2A

Date Collected: 01/18/17 13:00

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132732-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 19:26	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 15:06	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

HPLC/IC

Analysis Batch: 340258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	300.0	
MB 400-340258/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340258/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-340258/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 339670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total Recoverable	Water	3005A	
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 339694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	7470A	
MB 400-339694/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339694/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 339805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total Recoverable	Water	6020	339670
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	6020	339670
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	6020	339670

Analysis Batch: 340132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	7470A	339694
MB 400-339694/14-A	Method Blank	Total/NA	Water	7470A	339694
LCS 400-339694/15-A	Lab Control Sample	Total/NA	Water	7470A	339694

General Chemistry

Analysis Batch: 339614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	SM 2540C	
MB 400-339614/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339614/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132732-3 DU	GWA-2A	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-340258/4
Matrix: Water
Analysis Batch: 340258

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/27/17 10:35	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 10:35	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 10:35	1

Lab Sample ID: LCS 400-340258/5
Matrix: Water
Analysis Batch: 340258

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.88		mg/L		99	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-340258/6
Matrix: Water
Analysis Batch: 340258

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.81		mg/L		98	90 - 110	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	1	15

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339670/1-A ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 14:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 14:39	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 14:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 14:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 14:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 14:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 14:39	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 14:39	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 14:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 14:39	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

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

Lab Sample ID: LCS 400-339670/2-A
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0512		mg/L		102	80 - 120
Barium	0.0500	0.0552		mg/L		110	80 - 120
Beryllium	0.0500	0.0533		mg/L		107	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Chromium	0.0500	0.0473		mg/L		95	80 - 120
Cobalt	0.0500	0.0472		mg/L		94	80 - 120
Copper	0.0500	0.0452		mg/L		90	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Nickel	0.0500	0.0489		mg/L		98	80 - 120
Selenium	0.0500	0.0499		mg/L		100	80 - 120
Silver	0.0500	0.0492		mg/L		98	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Vanadium	0.0500	0.0501		mg/L		100	80 - 120
Zinc	0.0500	0.0489		mg/L		98	80 - 120
Lithium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.15		mg/L		103	80 - 120
Molybdenum	0.100	0.0971		mg/L		97	80 - 120
Boron	0.100	0.114		mg/L		114	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-339694/14-A
Matrix: Water
Analysis Batch: 340132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:17	01/27/17 12:30	1

Lab Sample ID: LCS 400-339694/15-A
Matrix: Water
Analysis Batch: 340132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00103		mg/L		102	80 - 120

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

Lab Sample ID: MB 400-339614/1
Matrix: Water
Analysis Batch: 339614

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/24/17 14:35	1

QC Sample Results

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

TestAmerica Job ID: 400-132732-3
 SDG: Landfill #3

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

Lab Sample ID: LCS 400-339614/2
Matrix: Water
Analysis Batch: 339614

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	286		mg/L		98	78 - 122

Lab Sample ID: 400-132732-3 DU
Matrix: Water
Analysis Batch: 339614

Client Sample ID: GWA-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	74		74.0		mg/L		0	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132732-3

SDG Number: Landfill #3

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: 400-132732-3
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132732-4

TestAmerica Sample Delivery Group: Landfill #3

Client Project/Site: CCR - Plant McIntosh

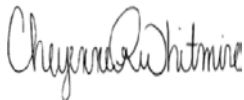
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:40:58 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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	6
Chronicle	7
QC Association	8
QC Sample Results	9
Chain of Custody	10
Receipt Checklists	11
Certification Summary	12

Method Summary

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132732-3	GWA-2A	Water	01/18/17 13:00	01/19/17 07:45

1

2

3

4

5

6

7

8

9

10

11

12

Client Sample Results

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

TestAmerica Job ID: 400-132732-4
 SDG: Landfill #3

Client Sample ID: GWA-2A

Lab Sample ID: 400-132732-3

Date Collected: 01/18/17 13:00

Matrix: Water

Date Received: 01/19/17 07:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.257		0.144	0.146	1.00	0.182	pCi/L	01/25/17 13:20	02/18/17 10:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		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	0.0971	U	0.318	0.318	1.00	0.550	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		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	0.354	U	0.349	0.350	5.00	0.550	pCi/L		02/20/17 09:41	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Client Sample ID: GWA-2A

Date Collected: 01/18/17 13:00

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132732-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	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: 400-132732-4
SDG: Landfill #3

Rad

Prep Batch: 289160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	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
400-132732-3	GWA-2A	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: 400-132732-4
SDG: Landfill #3

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						

Chain of Custody Record

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671


Client Information
Client Contact: Joju Abraham
Company: Southern Company
Address: 241 Ralph McGill Blvd SE B10185
City: Atlanta
State, Zip: GA, 30308
Phone: 404-506-7239
Email: JAbraham@southernco.com
Project Name: Plant McIntosh - Landfill #3
Site: Phase II CCR & State Permit

Sampler: C. Hurdle C.F., M. Rogers M.R.
Lab P#: Whitfire, Cheyenne R
E-Mail: cheyenne.whitfire@testamericainc.co
Carrier Tracking No(s):
Page: 1 of 1
Job #:

Analysis Requested

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #:
SSOW#:

Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)
TSS - SM 2540C : Cl, F, SO4 - EPA 300
Metals - (Part 237 Appendix III & IV) EPA 8020 & EPA 7470
Radium 226 & 228 - SW-846 9315 & 9320
Metals State Permit (EPA 6020)
Cu, V, Zn

Sample Identification	Sample Date	Sample Time	Type (C=Comp, G=grab)	Preservation Code	Special Instructions/Note:											
					Total Number of Containers											
GWA-2A	1/18/17	1300	G	GW	Special Instructions/Note: 400-132732-02 Chain of Custody Barcode: 											

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: 1-19-17/0745 Company: [Signature]
Relinquished by: [Signature] Date/Time: 01-23-17 14:25:11 SAU Company: [Signature]
Relinquished by: [Signature] Date/Time: 01-23-17 09:16:16 Company: [Signature]

Custody Seals Intact: Custody Seal No.: [Signature] Yes No



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132732-4

SDG Number: Landfill #3

Login Number: 132732

List Number: 1

Creator: Banda, Christy S

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1°C, 0.6°C; 2.7°C IR-6; 0.8°C, 1.10°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 <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: 400-132732-4
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132732-4
SDG: Landfill #3

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-134557-1

TestAmerica Sample Delivery Group: Landfill 3

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/14/2017 6:44:04 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	9
Chronicle	10
QC Association	11
QC Sample Results	13
Chain of Custody	18
Receipt Checklists	19
Certification Summary	20

Case Narrative

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Job ID: 400-134557-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-134557-1

HPLC/IC

Method(s) 300.0: The CCB for analytical batch 344626 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 344626 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) 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-134557-1

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
Fluoride	0.098	J B	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	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0019	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	2.7		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	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0090		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium - RA	0.0010	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-134557-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.098	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	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00063	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0091		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium - RA	0.00040	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00015	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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: 400-134557-1
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134557-1	GWA-1A	Water	02/28/17 10:10	03/02/17 09:06
400-134557-2	GWA-2A	Water	02/28/17 12:21	03/02/17 09:06

- 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: 400-134557-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-1

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			03/06/17 23:58	1
Fluoride	0.098	J B	0.20	0.082	mg/L			03/06/17 23:58	1
Sulfate	2.7		1.0	0.70	mg/L			03/06/17 23:58	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		03/03/17 09:15	03/06/17 14:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		03/03/17 09:15	03/06/17 14:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/03/17 09:15	03/06/17 14:39	5
Barium	0.027		0.0025	0.00049	mg/L		03/03/17 09:15	03/06/17 14:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:39	5
Vanadium	0.0019	J	0.0025	0.0014	mg/L		03/03/17 09:15	03/06/17 14:39	5
Boron	<0.021		0.050	0.021	mg/L		03/03/17 09:15	03/06/17 14:39	5
Zinc	<0.0065		0.020	0.0065	mg/L		03/03/17 09:15	03/06/17 14:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:39	5
Calcium	2.7		0.25	0.13	mg/L		03/03/17 09:15	03/06/17 14:39	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		03/03/17 09:15	03/06/17 14:39	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		03/03/17 09:15	03/06/17 14:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/03/17 09:15	03/06/17 14:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/03/17 09:15	03/06/17 14:39	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0090		0.0050	0.0032	mg/L		03/03/17 09:15	03/07/17 15:05	5
Selenium	0.0010	J	0.0013	0.00024	mg/L		03/03/17 09:15	03/07/17 15:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/03/17 09:15	03/07/17 15:05	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		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: 400-134557-1
SDG: Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-134557-2

Date Collected: 02/28/17 12:21

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	12		1.0	0.89	mg/L			03/07/17 00:21	1
Fluoride	0.098	J B	0.20	0.082	mg/L			03/07/17 00:21	1
Sulfate	1.7		1.0	0.70	mg/L			03/07/17 00:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/03/17 09:15	03/06/17 14:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/03/17 09:15	03/06/17 14:43	5
Barium	0.041		0.0025	0.00049	mg/L		03/03/17 09:15	03/06/17 14:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:43	5
Boron	<0.021		0.050	0.021	mg/L		03/03/17 09:15	03/06/17 14:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:43	5
Calcium	3.8		0.25	0.13	mg/L		03/03/17 09:15	03/06/17 14:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/03/17 09:15	03/06/17 14:43	5
Cobalt	0.00063	J	0.0025	0.00040	mg/L		03/03/17 09:15	03/06/17 14:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/03/17 09:15	03/06/17 14:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/03/17 09:15	03/06/17 14:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0091		0.0050	0.0032	mg/L		03/03/17 09:15	03/07/17 15:09	5
Selenium	0.00040	J	0.0013	0.00024	mg/L		03/03/17 09:15	03/07/17 15:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/03/17 09:15	03/07/17 15:09	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 10:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		5.0	3.4	mg/L			03/04/17 15:03	1

Definitions/Glossary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
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: 400-134557-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344626	03/06/17 23:58	KH1	TAL PEN
Total Recoverable	Prep	3005A			344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344740	03/06/17 14:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344944	03/07/17 15:05	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 10:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 02/28/17 12:21

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344626	03/07/17 00:21	KH1	TAL PEN
Total Recoverable	Prep	3005A			344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344740	03/06/17 14:43	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344944	03/07/17 15:09	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 10:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	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: 400-134557-1
SDG: Landfill 3

HPLC/IC

Analysis Batch: 344626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	300.0	
400-134557-2	GWA-2A	Total/NA	Water	300.0	
MB 400-344626/10	Method Blank	Total/NA	Water	300.0	
LCS 400-344626/11	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-344626/12	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134627-G-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-134627-G-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
400-134557-1	GWA-1A	Total/NA	Water	7470A	
400-134557-2	GWA-2A	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: 344283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total Recoverable	Water	3005A	
400-134557-1 - RA	GWA-1A	Total Recoverable	Water	3005A	
400-134557-2	GWA-2A	Total Recoverable	Water	3005A	
400-134557-2 - RA	GWA-2A	Total Recoverable	Water	3005A	
MB 400-344283/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-134562-G-21-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-134562-G-21-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 344641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	7470A	344229
400-134557-2	GWA-2A	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

Analysis Batch: 344740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total Recoverable	Water	6020	344283
400-134557-2	GWA-2A	Total Recoverable	Water	6020	344283
MB 400-344283/1-A ^5	Method Blank	Total Recoverable	Water	6020	344283
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	6020	344283
400-134562-G-21-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	344283
400-134562-G-21-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	344283

QC Association Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Metals (Continued)

Analysis Batch: 344944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1 - RA	GWA-1A	Total Recoverable	Water	6020	344283
400-134557-2 - RA	GWA-2A	Total Recoverable	Water	6020	344283
MB 400-344283/1-A ^5	Method Blank	Total Recoverable	Water	6020	344283
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	6020	344283
400-134562-G-21-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	344283
400-134562-G-21-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	344283

Analysis Batch: 345334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	6020	344283

General Chemistry

Analysis Batch: 344530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	SM 2540C	
400-134557-2	GWA-2A	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	
400-134557-1 DU	GWA-1A	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-344626/10
Matrix: Water
Analysis Batch: 344626

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			03/06/17 13:42	1
Fluoride	0.0858	J	0.20	0.082	mg/L			03/06/17 13:42	1
Sulfate	<0.70		1.0	0.70	mg/L			03/06/17 13:42	1

Lab Sample ID: LCS 400-344626/11
Matrix: Water
Analysis Batch: 344626

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	10.4		mg/L		104	90 - 110

Lab Sample ID: LCSD 400-344626/12
Matrix: Water
Analysis Batch: 344626

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	0	15

Lab Sample ID: 400-134627-G-1 MS
Matrix: Water
Analysis Batch: 344626

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	210		100	315		mg/L		105	80 - 120
Fluoride	1.1	J B	100	102		mg/L		101	80 - 120
Sulfate	28		100	132		mg/L		103	80 - 120

Lab Sample ID: 400-134627-G-1 MSD
Matrix: Water
Analysis Batch: 344626

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	210		100	316		mg/L		106	80 - 120	0	20
Fluoride	1.1	J B	100	102		mg/L		101	80 - 120	0	20
Sulfate	28		100	132		mg/L		104	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-344283/1-A ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/03/17 09:15	03/06/17 11:57	5
Copper	<0.0021		0.0025	0.0021	mg/L		03/03/17 09:15	03/06/17 11:57	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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

Lab Sample ID: MB 400-344283/1-A ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/03/17 09:15	03/06/17 11:57	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/03/17 09:15	03/06/17 11:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 11:57	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		03/03/17 09:15	03/06/17 11:57	5
Boron	<0.021		0.050	0.021	mg/L		03/03/17 09:15	03/06/17 11:57	5
Zinc	<0.0065		0.020	0.0065	mg/L		03/03/17 09:15	03/06/17 11:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 11:57	5
Calcium	<0.13		0.25	0.13	mg/L		03/03/17 09:15	03/06/17 11:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/03/17 09:15	03/06/17 11:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/03/17 09:15	03/06/17 11:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/03/17 09:15	03/06/17 11:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/03/17 09:15	03/06/17 11:57	5

Lab Sample ID: MB 400-344283/1-A ^5
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		03/03/17 09:15	03/07/17 12:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/03/17 09:15	03/07/17 12:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/03/17 09:15	03/07/17 12:22	5

Lab Sample ID: LCS 400-344283/2-A
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0545		mg/L		109	80 - 120
Copper	0.0500	0.0504		mg/L		101	80 - 120
Arsenic	0.0500	0.0518		mg/L		104	80 - 120
Nickel	0.0500	0.0507		mg/L		101	80 - 120
Barium	0.0500	0.0509		mg/L		102	80 - 120
Silver	0.0500	0.0437		mg/L		87	80 - 120
Beryllium	0.0500	0.0483		mg/L		97	80 - 120
Vanadium	0.0500	0.0499		mg/L		100	80 - 120
Boron	0.100	0.0943		mg/L		94	80 - 120
Zinc	0.0500	0.0512		mg/L		102	80 - 120
Cadmium	0.0500	0.0526		mg/L		105	80 - 120
Calcium	5.00	5.36		mg/L		107	80 - 120
Chromium	0.0500	0.0540		mg/L		108	80 - 120
Cobalt	0.0500	0.0508		mg/L		102	80 - 120
Lead	0.0500	0.0524		mg/L		105	80 - 120
Molybdenum	0.100	0.0994		mg/L		99	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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

Lab Sample ID: LCS 400-344283/2-A
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Lithium	0.0500	0.0498		mg/L		100	80 - 120	
Selenium	0.0500	0.0493		mg/L		99	80 - 120	
Thallium	0.0100	0.0101		mg/L		101	80 - 120	

Lab Sample ID: LCS 400-344283/2-A
Matrix: Water
Analysis Batch: 345334

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Antimony	0.0500	0.0555		mg/L		111	80 - 120	

Lab Sample ID: 400-134562-G-21-B MS ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Antimony	<0.0010		0.0500	0.0567		mg/L		113	75 - 125	
Copper	<0.0021		0.0500	0.0539		mg/L		108	75 - 125	
Arsenic	<0.00046		0.0500	0.0539		mg/L		108	75 - 125	
Nickel	<0.0018		0.0500	0.0537		mg/L		107	75 - 125	
Barium	0.096		0.0500	0.152		mg/L		111	75 - 125	
Silver	<0.00011		0.0500	0.0463		mg/L		93	75 - 125	
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125	
Vanadium	0.0033		0.0500	0.0531		mg/L		100	75 - 125	
Boron	<0.021		0.100	0.107		mg/L		107	75 - 125	
Zinc	<0.0065		0.0500	0.0557		mg/L		111	75 - 125	
Cadmium	<0.00034		0.0500	0.0545		mg/L		109	75 - 125	
Calcium	2.0		5.00	7.89		mg/L		118	75 - 125	
Chromium	<0.0011		0.0500	0.0585		mg/L		117	75 - 125	
Cobalt	0.00085	J	0.0500	0.0564		mg/L		111	75 - 125	
Lead	<0.00035		0.0500	0.0510		mg/L		102	75 - 125	
Molybdenum	<0.00085		0.100	0.0997		mg/L		100	75 - 125	

Lab Sample ID: 400-134562-G-21-B MS ^5
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Lithium	<0.0032		0.0500	0.0509		mg/L		102	75 - 125	
Selenium	<0.00024		0.0500	0.0485		mg/L		97	75 - 125	
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	

Lab Sample ID: 400-134562-G-21-C MSD ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
									Limits		RPD	Limit
Antimony	<0.0010		0.0500	0.0551		mg/L		110	75 - 125	3	20	
Copper	<0.0021		0.0500	0.0536		mg/L		107	75 - 125	1	20	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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

Lab Sample ID: 400-134562-G-21-C MSD ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Arsenic	<0.00046		0.0500	0.0538		mg/L		108	75 - 125	0	20
Nickel	<0.0018		0.0500	0.0527		mg/L		105	75 - 125	2	20
Barium	0.096		0.0500	0.149		mg/L		105	75 - 125	2	20
Silver	<0.00011		0.0500	0.0448		mg/L		90	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0495		mg/L		99	75 - 125	1	20
Vanadium	0.0033		0.0500	0.0520		mg/L		97	75 - 125	2	20
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125	3	20
Zinc	<0.0065		0.0500	0.0557		mg/L		111	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0541		mg/L		108	75 - 125	1	20
Calcium	2.0		5.00	7.61		mg/L		112	75 - 125	4	20
Chromium	<0.0011		0.0500	0.0585		mg/L		117	75 - 125	0	20
Cobalt	0.00085	J	0.0500	0.0551		mg/L		109	75 - 125	2	20
Lead	<0.00035		0.0500	0.0511		mg/L		102	75 - 125	0	20
Molybdenum	<0.00085		0.100	0.0991		mg/L		99	75 - 125	1	20

Lab Sample ID: 400-134562-G-21-C MSD ^5
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Lithium	<0.0032		0.0500	0.0485		mg/L		97	75 - 125	5	20
Selenium	<0.00024		0.0500	0.0494		mg/L		99	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	1	20

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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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	%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	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00203		mg/L		101	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
 SDG: Landfill 3

Method: 7470A - Mercury (CVAA) (Continued)

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	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00206		mg/L		102	80 - 120	2	20

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: 400-134557-1 DU
Matrix: Water
Analysis Batch: 344530

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	74		74.0		mg/L		0	5

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134557-1

SDG Number: Landfill 3

Login Number: 134557

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	1.1°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-134557-2

TestAmerica Sample Delivery Group: Landfill 3

Client Project/Site: CCR - Plant McIntosh

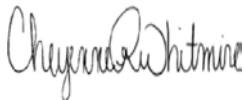
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/31/2017 5:12:17 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	7
Chronicle	8
QC Association	9
QC Sample Results	10
Chain of Custody	12
Receipt Checklists	13
Certification Summary	14

Method Summary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134557-1	GWA-1A	Water	02/28/17 10:10	03/02/17 09:06
400-134557-2	GWA-2A	Water	02/28/17 12:21	03/02/17 09:06

1

2

3

4

5

6

7

8

9

10

11

12

Client Sample Results

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

TestAmerica Job ID: 400-134557-2
 SDG: Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-134557-1

Date Collected: 02/28/17 10:10

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	0.120		0.0768	0.0776	1.00	0.101	pCi/L	03/07/17 13:34	03/29/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/07/17 13:34	03/29/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.465		0.248	0.252	1.00	0.368	pCi/L	03/07/17 14:03	03/21/17 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/07/17 14:03	03/21/17 14:25	1
Y Carrier	85.1		40 - 110					03/07/17 14:03	03/21/17 14:25	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	0.585		0.260	0.264	5.00	0.368	pCi/L		03/30/17 10:03	1

Client Sample Results

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

TestAmerica Job ID: 400-134557-2
 SDG: Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-134557-2

Date Collected: 02/28/17 12:21

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	0.220		0.0978	0.0998	1.00	0.111	pCi/L	03/07/17 13:34	03/29/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/07/17 13:34	03/29/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.302	U	0.246	0.247	1.00	0.390	pCi/L	03/07/17 14:03	03/21/17 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/07/17 14:03	03/21/17 14:25	1
Y Carrier	83.2		40 - 110					03/07/17 14:03	03/21/17 14:25	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	0.522		0.264	0.267	5.00	0.390	pCi/L		03/30/17 10:03	1

Definitions/Glossary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296424	03/07/17 13:34	BME	TAL SL
Total/NA	Analysis	9315		1	300476	03/29/17 08:05	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296429	03/07/17 14:03	BME	TAL SL
Total/NA	Analysis	9320		1	298669	03/21/17 14:25	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300758	03/30/17 10:03	RTM	TAL SL

Client Sample ID: GWA-2A

Date Collected: 02/28/17 12:21

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296424	03/07/17 13:34	BME	TAL SL
Total/NA	Analysis	9315		1	300476	03/29/17 08:05	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296429	03/07/17 14:03	BME	TAL SL
Total/NA	Analysis	9320		1	298669	03/21/17 14:25	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300758	03/30/17 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: 400-134557-2
SDG: Landfill 3

Rad

Prep Batch: 296424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	PrecSep-21	
400-134557-2	GWA-2A	Total/NA	Water	PrecSep-21	
MB 160-296424/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-296424/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-76246-L-8-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 296429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	PrecSep_0	
400-134557-2	GWA-2A	Total/NA	Water	PrecSep_0	
MB 160-296429/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-296429/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-76246-L-8-D DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-296424/1-A
Matrix: Water
Analysis Batch: 300476

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296424

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04092	U	0.0542	0.0543	1.00	0.0905	pCi/L	03/07/17 13:34	03/29/17 08:03	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/07/17 13:34	03/29/17 08:03	1

Lab Sample ID: LCS 160-296424/2-A
Matrix: Water
Analysis Batch: 300476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296424

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	11.25		1.17	1.00	0.111	pCi/L	99	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.1		40 - 110						

Lab Sample ID: 240-76246-L-8-B DU
Matrix: Water
Analysis Batch: 300476

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296424

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.260		0.3544		0.116	1.00	0.0844	pCi/L	0.44	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	89.7		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-296429/1-A
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296429

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1928	U	0.229	0.230	1.00	0.379	pCi/L	03/07/17 14:03	03/21/17 14:22	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/07/17 14:03	03/21/17 14:22	1
Y Carrier	85.9		40 - 110					03/07/17 14:03	03/21/17 14:22	1

QC Sample Results

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

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

Lab Sample ID: LCS 160-296429/2-A
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296429

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.7	13.78		1.49	1.00	0.359	pCi/L	101	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.1		40 - 110
Y Carrier	85.9		40 - 110

Lab Sample ID: 240-76246-L-8-D DU
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296429

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.331		0.4595		0.245	1.00	0.353	pCi/L	0.28	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	89.7		40 - 110
Y Carrier	87.3		40 - 110

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

Lab Sample ID: 400-134503-A-7 DU
Matrix: Water
Analysis Batch: 300758

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	0.0730	U	0.3797		0.207	5.00	0.290	pCi/L	0.78	

TestAmerica Pensacola
 3355 McLennan 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: **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 #3
 Site: CCR

Lab Pk#: Whitfire, Cheyenne R
 E-Mail: cheyenne.whitfire@testamericainc.com
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#:

Sample Identification	Sample Date	Sample Time (C=Comp, G=grab)	Sample Type (C=Comp, G=grab)	Matrix (Residue, Swab, Effluent, etc.)	Analysis Requested	Special Instructions/Note
GWA-1A	2/28/17	1010	G	W	TD8 SM 2540C: Cl, F, SO4 - EPA 300 Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-046 9315 & 9320	
GWA-2A	2/28/17	1221	G	W		

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: *W. H. (Signature)* Date: 2/28/17 Company: _____
 Relinquished by: _____ Date: _____ Company: _____
 Relinquished by: _____ Date: _____ Company: _____

Custody Seal Intact: Yes No
 Custody Seal No.:

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Analysis Requested	Special Instructions/Note
GWA-1A	2/28/17	1010	G	W	TD8 SM 2540C: Cl, F, SO4 - EPA 300 Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-046 9315 & 9320	
GWA-2A	2/28/17	1221	G	W		

Relinquished by: *W. H. (Signature)* Date: 2/28/17 Company: _____
 Relinquished by: _____ Date: _____ Company: _____
 Relinquished by: _____ Date: _____ Company: _____

Custody Seal Intact: Yes No
 Custody Seal No.:



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134557-2

SDG Number: Landfill 3

Login Number: 134557

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	1.1°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-134557-2
SDG: Landfill 3

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-132732-3

TestAmerica Sample Delivery Group: Landfill #3

Client Project/Site: CCR - Plant McIntosh

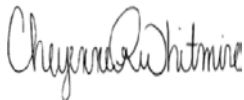
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:38:11 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	8
Chronicle	9
QC Association	10
QC Sample Results	11
Chain of Custody	14
Receipt Checklists	15
Certification Summary	16

Case Narrative

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

Job ID: 400-132732-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132732-3

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 339670 and analytical batch 339805 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The matrix spike duplicate precision (RPD) for the following sample associated with preparation batch 339670 and analytical batch 339805 was outside control limits: (400-132731-C-9-C MSD).

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-132732-3
 SDG: Landfill #3

Client Sample ID: GWA-2A

Lab Sample ID: 400-132732-3

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
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.00060	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.0014		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0028		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Lithium	0.0096		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Calcium	3.3		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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



Method Summary

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

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: 400-132732-3
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132732-3	GWA-2A	Water	01/18/17 13:00	01/19/17 07:45

- 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: 400-132732-3
SDG: Landfill #3

Client Sample ID: GWA-2A

Date Collected: 01/18/17 13:00

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132732-3

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			01/27/17 19:26	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 19:26	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 19:26	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		01/25/17 08:40	01/25/17 15:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 15:06	5
Barium	0.042		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 15:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 15:06	5
Cobalt	0.00060	J	0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 15:06	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 15:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 15:06	5
Selenium	0.0014		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 15:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 15:06	5
Vanadium	0.0028		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 15:06	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 15:06	5
Lithium	0.0096		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 15:06	5
Calcium	3.3		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 15:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 15:06	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 15:06	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		01/25/17 09:17	01/27/17 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			01/24/17 14:35	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

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: 400-132732-3
SDG: Landfill #3

Client Sample ID: GWA-2A

Date Collected: 01/18/17 13:00

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132732-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 19:26	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 15:06	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

HPLC/IC

Analysis Batch: 340258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	300.0	
MB 400-340258/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340258/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-340258/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 339670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total Recoverable	Water	3005A	
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 339694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	7470A	
MB 400-339694/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339694/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 339805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total Recoverable	Water	6020	339670
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	6020	339670
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	6020	339670

Analysis Batch: 340132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	7470A	339694
MB 400-339694/14-A	Method Blank	Total/NA	Water	7470A	339694
LCS 400-339694/15-A	Lab Control Sample	Total/NA	Water	7470A	339694

General Chemistry

Analysis Batch: 339614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	Total/NA	Water	SM 2540C	
MB 400-339614/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339614/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132732-3 DU	GWA-2A	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-340258/4
Matrix: Water
Analysis Batch: 340258

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/27/17 10:35	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 10:35	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 10:35	1

Lab Sample ID: LCS 400-340258/5
Matrix: Water
Analysis Batch: 340258

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.88		mg/L		99	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-340258/6
Matrix: Water
Analysis Batch: 340258

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.81		mg/L		98	90 - 110	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	1	15

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339670/1-A ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 14:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 14:39	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 14:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 14:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 14:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 14:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 14:39	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 14:39	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 14:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 14:39	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132732-3
SDG: Landfill #3

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

Lab Sample ID: LCS 400-339670/2-A
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0512		mg/L		102	80 - 120
Barium	0.0500	0.0552		mg/L		110	80 - 120
Beryllium	0.0500	0.0533		mg/L		107	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Chromium	0.0500	0.0473		mg/L		95	80 - 120
Cobalt	0.0500	0.0472		mg/L		94	80 - 120
Copper	0.0500	0.0452		mg/L		90	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Nickel	0.0500	0.0489		mg/L		98	80 - 120
Selenium	0.0500	0.0499		mg/L		100	80 - 120
Silver	0.0500	0.0492		mg/L		98	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Vanadium	0.0500	0.0501		mg/L		100	80 - 120
Zinc	0.0500	0.0489		mg/L		98	80 - 120
Lithium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.15		mg/L		103	80 - 120
Molybdenum	0.100	0.0971		mg/L		97	80 - 120
Boron	0.100	0.114		mg/L		114	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-339694/14-A
Matrix: Water
Analysis Batch: 340132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:17	01/27/17 12:30	1

Lab Sample ID: LCS 400-339694/15-A
Matrix: Water
Analysis Batch: 340132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00103		mg/L		102	80 - 120

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

Lab Sample ID: MB 400-339614/1
Matrix: Water
Analysis Batch: 339614

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/24/17 14:35	1

QC Sample Results

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

TestAmerica Job ID: 400-132732-3
 SDG: Landfill #3

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

Lab Sample ID: LCS 400-339614/2
Matrix: Water
Analysis Batch: 339614

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	286		mg/L		98	78 - 122

Lab Sample ID: 400-132732-3 DU
Matrix: Water
Analysis Batch: 339614

Client Sample ID: GWA-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	74		74.0		mg/L		0	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132732-3

SDG Number: Landfill #3

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: 400-132732-3
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132732-4

TestAmerica Sample Delivery Group: Landfill #3

Client Project/Site: CCR - Plant McIntosh

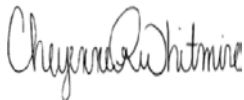
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:40:58 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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	6
Chronicle	7
QC Association	8
QC Sample Results	9
Chain of Custody	10
Receipt Checklists	11
Certification Summary	12

Method Summary

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132732-3	GWA-2A	Water	01/18/17 13:00	01/19/17 07:45

1

2

3

4

5

6

7

8

9

10

11

12

Client Sample Results

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Client Sample ID: GWA-2A

Lab Sample ID: 400-132732-3

Date Collected: 01/18/17 13:00

Matrix: Water

Date Received: 01/19/17 07:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.257		0.144	0.146	1.00	0.182	pCi/L	01/25/17 13:20	02/18/17 10:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		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	0.0971	U	0.318	0.318	1.00	0.550	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.6		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	0.354	U	0.349	0.350	5.00	0.550	pCi/L		02/20/17 09:41	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-132732-4
SDG: Landfill #3

Client Sample ID: GWA-2A

Date Collected: 01/18/17 13:00

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132732-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	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: 400-132732-4
SDG: Landfill #3

Rad

Prep Batch: 289160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132732-3	GWA-2A	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
400-132732-3	GWA-2A	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: 400-132732-4
SDG: Landfill #3

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						

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132732-4

SDG Number: Landfill #3

Login Number: 132732

List Number: 1

Creator: Banda, Christy S

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1°C, 0.6°C; 2.7°C IR-6; 0.8°C, 1.10°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 <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: 400-132732-4
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132732-4
SDG: Landfill #3

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-132918-1

TestAmerica Sample Delivery Group: Landfill #3

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 6:42:42 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through
TotalAccess

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	7
Sample Summary	8
Client Sample Results	9
Definitions	19
Chronicle	20
QC Association	23
QC Sample Results	27
Chain of Custody	36
Receipt Checklists	39
Certification Summary	40

Case Narrative

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Job ID: 400-132918-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132918-1

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: GWC-5 (400-132918-10). Elevated reporting limits (RLs) are provided.

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 339670 and analytical batch 339805 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The matrix spike duplicate precision (RPD) for the following sample associated with preparation batch 339670 and analytical batch 339805 was outside control limits: (400-132731-C-9-C MSD).

Method(s) 6020: The method blank for preparation batch 339997 and analytical batch 340403 contained Antimony 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.



Detection Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-4

Lab Sample ID: 400-132918-1

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	0.089	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.00041	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0025		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Boron	0.027	J	0.050	0.021	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-3A

Lab Sample ID: 400-132918-2

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
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0039		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00087	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0035	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Calcium	1.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-132918-3

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
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.079		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0020	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00046	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0010	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00060	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0033		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0065	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Boron	0.036	J	0.050	0.021	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

Detection Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-7

Lab Sample ID: 400-132918-4

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
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0080		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.015		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0025		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	86		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-132918-5

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-132918-6

No Detections.

Client Sample ID: GWA-3B

Lab Sample ID: 400-132918-7

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	9.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lead	0.00055	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0035		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	3.7		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-1

Lab Sample ID: 400-132918-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.5		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0063		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	1.3		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-2

Lab Sample ID: 400-132918-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.4		1.0	0.89	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWC-2 (Continued)

Lab Sample ID: 400-132918-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0034		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00067	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0062		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0071	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	2.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-5

Lab Sample ID: 400-132918-10

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	0.84		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	67		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0027		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.42		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0090		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.025		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00072		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Vanadium	0.044		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.010	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.037		0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		50	34	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: 400-132918-1
SDG: Landfill #3

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: 400-132918-1
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132918-1	GWA-4	Water	01/19/17 10:48	01/20/17 13:45
400-132918-2	GWA-3A	Water	01/19/17 13:10	01/20/17 13:45
400-132918-3	GWA-5	Water	01/19/17 12:07	01/20/17 13:45
400-132918-4	GWA-7	Water	01/19/17 16:23	01/20/17 13:45
400-132918-5	FB-1	Water	01/19/17 11:40	01/20/17 13:45
400-132918-6	FERB-1	Water	01/19/17 12:15	01/20/17 13:45
400-132918-7	GWA-3B	Water	01/23/17 14:05	01/24/17 08:00
400-132918-8	GWC-1	Water	01/23/17 16:00	01/24/17 08:00
400-132918-9	GWC-2	Water	01/24/17 11:00	01/25/17 08:00
400-132918-10	GWC-5	Water	01/24/17 12:40	01/25/17 08:00



Client Sample Results

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

TestAmerica Job ID: 400-132918-1
 SDG: Landfill #3

Client Sample ID: GWA-4
Date Collected: 01/19/17 10:48
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-1
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			01/30/17 12:14	1
Fluoride	0.089	J	0.20	0.082	mg/L			01/30/17 12:14	1
Sulfate	6.3		1.0	0.70	mg/L			01/30/17 12:14	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		01/25/17 08:40	01/25/17 16:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:18	5
Barium	0.052		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:18	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:18	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 16:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 16:18	5
Vanadium	0.0025		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 16:18	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 16:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:18	5
Calcium	1.1		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 16:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:18	5
Boron	0.027	J	0.050	0.021	mg/L		01/25/17 08:40	01/25/17 16:18	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:41	01/30/17 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-3A

Date Collected: 01/19/17 13:10

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-2

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			01/30/17 13:22	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 13:22	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 13:22	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		01/25/17 08:40	01/25/17 16:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:44	5
Barium	0.052		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:44	5
Chromium	0.0039		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:44	5
Cobalt	0.00087	J	0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:44	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 16:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 16:44	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 16:44	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 16:44	5
Lithium	0.0035	J	0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:44	5
Calcium	1.8		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 16:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:44	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 16:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:41	01/30/17 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-5
Date Collected: 01/19/17 12:07
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-3
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			01/30/17 13:45	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 13:45	1
Sulfate	11		1.0	0.70	mg/L			01/30/17 13:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 16:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:48	5
Barium	0.079		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:48	5
Chromium	0.0020	J	0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:48	5
Cobalt	0.00046	J	0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:48	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 16:48	5
Lead	0.0010	J	0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:48	5
Selenium	0.00060	J	0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 16:48	5
Vanadium	0.0033		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 16:48	5
Zinc	0.0065	J	0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 16:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:48	5
Calcium	2.0		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 16:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:48	5
Boron	0.036	J	0.050	0.021	mg/L		01/25/17 08:40	01/25/17 16:48	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		01/25/17 09:41	01/30/17 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-7

Date Collected: 01/19/17 16:23

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-4

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			01/30/17 14:08	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 14:08	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 14:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 16:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:53	5
Barium	0.023		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:53	5
Chromium	0.0080		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:53	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 16:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:53	5
Selenium	0.015		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 16:53	5
Vanadium	0.0025		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 16:53	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 16:53	5
Lithium	0.010		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:53	5
Calcium	1.3		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 16:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:53	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 16:53	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:41	01/30/17 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	86		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: FB-1
Date Collected: 01/19/17 11:40
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-5
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			01/30/17 14:31	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 14:31	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 14:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 16:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:57	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:57	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 16:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 16:57	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 16:57	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 16:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:57	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 16:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:57	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 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		01/25/17 09:41	01/30/17 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
 SDG: Landfill #3

Client Sample ID: FERB-1
Date Collected: 01/19/17 12:15
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-6
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			01/30/17 15:39	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 15:39	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 15:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 17:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 17:02	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 17:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 17:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 17:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 17:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 17:02	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 17:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 17:02	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 17:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 17:02	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 17:02	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 17:02	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 17:02	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 17:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 17:02	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 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		01/25/17 09:41	01/30/17 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-3B
Date Collected: 01/23/17 14:05
Date Received: 01/24/17 08:00

Lab Sample ID: 400-132918-7
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			01/30/17 16:02	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 16:02	1
Sulfate	9.7		1.0	0.70	mg/L			01/30/17 16:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/27/17 08:50	01/30/17 15:25	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/27/17 08:50	01/30/17 15:25	5
Barium	0.044		0.0025	0.00049	mg/L		01/27/17 08:50	01/30/17 15:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/27/17 08:50	01/30/17 15:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/27/17 08:50	01/30/17 15:25	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/27/17 08:50	01/30/17 15:25	5
Lead	0.00055 J		0.0013	0.00035	mg/L		01/27/17 08:50	01/30/17 15:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/27/17 08:50	01/30/17 15:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/27/17 08:50	01/30/17 15:25	5
Vanadium	0.0035		0.0025	0.0014	mg/L		01/27/17 08:50	01/30/17 15:25	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/27/17 08:50	01/30/17 15:25	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/27/17 08:50	01/30/17 15:25	5
Calcium	3.7		0.25	0.13	mg/L		01/27/17 08:50	01/30/17 15:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/27/17 08:50	01/30/17 15:25	5
Boron	<0.021		0.050	0.021	mg/L		01/27/17 08:50	01/30/17 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		01/28/17 13:46	01/30/17 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			01/26/17 12:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWC-1
Date Collected: 01/23/17 16:00
Date Received: 01/24/17 08:00

Lab Sample ID: 400-132918-8
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.89	mg/L			01/30/17 16:25	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 16:25	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 16:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/27/17 08:50	01/30/17 15:30	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/27/17 08:50	01/30/17 15:30	5
Barium	0.023		0.0025	0.00049	mg/L		01/27/17 08:50	01/30/17 15:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/27/17 08:50	01/30/17 15:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/27/17 08:50	01/30/17 15:30	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/27/17 08:50	01/30/17 15:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/27/17 08:50	01/30/17 15:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/27/17 08:50	01/30/17 15:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/27/17 08:50	01/30/17 15:30	5
Vanadium	0.0063		0.0025	0.0014	mg/L		01/27/17 08:50	01/30/17 15:30	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/27/17 08:50	01/30/17 15:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/27/17 08:50	01/30/17 15:30	5
Calcium	1.3		0.25	0.13	mg/L		01/27/17 08:50	01/30/17 15:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/27/17 08:50	01/30/17 15:30	5
Boron	<0.021		0.050	0.021	mg/L		01/27/17 08:50	01/30/17 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		01/28/17 13:46	01/30/17 13:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			01/26/17 12:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWC-2
Date Collected: 01/24/17 11:00
Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-9
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.4		1.0	0.89	mg/L			01/30/17 16:48	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 16:48	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 16:48	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		01/27/17 08:50	01/30/17 15:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/27/17 08:50	01/30/17 15:35	5
Barium	0.060		0.0025	0.00049	mg/L		01/27/17 08:50	01/30/17 15:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:35	5
Chromium	0.0034		0.0025	0.0011	mg/L		01/27/17 08:50	01/30/17 15:35	5
Cobalt	0.00067	J	0.0025	0.00040	mg/L		01/27/17 08:50	01/30/17 15:35	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/27/17 08:50	01/30/17 15:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/27/17 08:50	01/30/17 15:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/27/17 08:50	01/30/17 15:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/27/17 08:50	01/30/17 15:35	5
Vanadium	0.0062		0.0025	0.0014	mg/L		01/27/17 08:50	01/30/17 15:35	5
Zinc	0.0071	J	0.020	0.0065	mg/L		01/27/17 08:50	01/30/17 15:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/27/17 08:50	01/30/17 15:35	5
Calcium	2.9		0.25	0.13	mg/L		01/27/17 08:50	01/30/17 15:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/27/17 08:50	01/30/17 15:35	5
Boron	<0.021		0.050	0.021	mg/L		01/27/17 08:50	01/30/17 15:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/28/17 13:46	01/30/17 14:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		5.0	3.4	mg/L			01/28/17 14:45	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWC-5
Date Collected: 01/24/17 12:40
Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-10
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			01/31/17 21:50	1
Fluoride	0.84		0.20	0.082	mg/L			01/31/17 21:50	1
Sulfate	67		5.0	3.5	mg/L			01/31/17 22:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/27/17 08:50	01/30/17 15:43	5
Arsenic	0.0027		0.0013	0.00046	mg/L		01/27/17 08:50	01/30/17 15:43	5
Barium	0.42		0.0025	0.00049	mg/L		01/27/17 08:50	01/30/17 15:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 15:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/27/17 08:50	01/30/17 15:43	5
Cobalt	0.0090		0.0025	0.00040	mg/L		01/27/17 08:50	01/30/17 15:43	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/27/17 08:50	01/30/17 15:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/27/17 08:50	01/30/17 15:43	5
Selenium	0.025		0.0013	0.00024	mg/L		01/27/17 08:50	01/30/17 15:43	5
Thallium	0.00072		0.00050	0.000085	mg/L		01/27/17 08:50	01/30/17 15:43	5
Vanadium	0.044		0.0025	0.0014	mg/L		01/27/17 08:50	01/30/17 15:43	5
Zinc	0.010 J		0.020	0.0065	mg/L		01/27/17 08:50	01/30/17 15:43	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/27/17 08:50	01/30/17 15:43	5
Calcium	10		0.25	0.13	mg/L		01/27/17 08:50	01/30/17 15:43	5
Molybdenum	0.037		0.015	0.00085	mg/L		01/27/17 08:50	01/30/17 15:43	5
Boron	<0.021		0.050	0.021	mg/L		01/27/17 08:50	01/30/17 15:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/28/17 13:46	01/30/17 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		50	34	mg/L			01/28/17 14:45	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

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
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWA-4
Date Collected: 01/19/17 10:48
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 12:14	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:18	DRE	TAL PEN
Total/NA	Prep	7470A			339698	01/25/17 09:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: GWA-3A
Date Collected: 01/19/17 13:10
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 13:22	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:44	DRE	TAL PEN
Total/NA	Prep	7470A			339698	01/25/17 09:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: GWA-5
Date Collected: 01/19/17 12:07
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 13:45	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:48	DRE	TAL PEN
Total/NA	Prep	7470A			339698	01/25/17 09:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: GWA-7
Date Collected: 01/19/17 16:23
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 14:08	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:53	DRE	TAL PEN
Total/NA	Prep	7470A			339698	01/25/17 09:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: FB-1

Lab Sample ID: 400-132918-5

Date Collected: 01/19/17 11:40

Matrix: Water

Date Received: 01/20/17 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 14:31	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:57	DRE	TAL PEN
Total/NA	Prep	7470A			339698	01/25/17 09:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-132918-6

Date Collected: 01/19/17 12:15

Matrix: Water

Date Received: 01/20/17 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 15:39	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 17:02	DRE	TAL PEN
Total/NA	Prep	7470A			339698	01/25/17 09:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: GWA-3B

Lab Sample ID: 400-132918-7

Date Collected: 01/23/17 14:05

Matrix: Water

Date Received: 01/24/17 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 16:02	KH1	TAL PEN
Total Recoverable	Prep	3005A			339997	01/27/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340403	01/30/17 15:25	DRE	TAL PEN
Total/NA	Prep	7470A			339826	01/28/17 13:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339896	01/26/17 12:41	RRC	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-132918-8

Date Collected: 01/23/17 16:00

Matrix: Water

Date Received: 01/24/17 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 16:25	KH1	TAL PEN
Total Recoverable	Prep	3005A			339997	01/27/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340403	01/30/17 15:30	DRE	TAL PEN
Total/NA	Prep	7470A			339826	01/28/17 13:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 13:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339896	01/26/17 12:41	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Client Sample ID: GWC-2

Date Collected: 01/24/17 11:00

Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340301	01/30/17 16:48	KH1	TAL PEN
Total Recoverable	Prep	3005A			339997	01/27/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340403	01/30/17 15:35	DRE	TAL PEN
Total/NA	Prep	7470A			339826	01/28/17 13:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 14:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340187	01/28/17 14:45	TET	TAL PEN

Client Sample ID: GWC-5

Date Collected: 01/24/17 12:40

Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 21:50	KH1	TAL PEN
Total/NA	Analysis	300.0		5	340481	01/31/17 22:12	KH1	TAL PEN
Total Recoverable	Prep	3005A			339997	01/27/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340403	01/30/17 15:43	DRE	TAL PEN
Total/NA	Prep	7470A			339826	01/28/17 13:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340341	01/30/17 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340187	01/28/17 14:45	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: 400-132918-1
SDG: Landfill #3

HPLC/IC

Analysis Batch: 340301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total/NA	Water	300.0	
400-132918-2	GWA-3A	Total/NA	Water	300.0	
400-132918-3	GWA-5	Total/NA	Water	300.0	
400-132918-4	GWA-7	Total/NA	Water	300.0	
400-132918-5	FB-1	Total/NA	Water	300.0	
400-132918-6	FERB-1	Total/NA	Water	300.0	
400-132918-7	GWA-3B	Total/NA	Water	300.0	
400-132918-8	GWC-1	Total/NA	Water	300.0	
400-132918-9	GWC-2	Total/NA	Water	300.0	
MB 400-340301/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340301/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340301/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132918-1 MS	GWA-4	Total/NA	Water	300.0	
400-132918-1 MSD	GWA-4	Total/NA	Water	300.0	
400-132918-9 DU	GWC-2	Total/NA	Water	300.0	

Analysis Batch: 340481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-10	GWC-5	Total/NA	Water	300.0	
400-132918-10	GWC-5	Total/NA	Water	300.0	
MB 400-340481/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340481/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340481/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132829-B-24 MS	Matrix Spike	Total/NA	Water	300.0	
400-132829-B-24 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 339670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total Recoverable	Water	3005A	
400-132918-2	GWA-3A	Total Recoverable	Water	3005A	
400-132918-3	GWA-5	Total Recoverable	Water	3005A	
400-132918-4	GWA-7	Total Recoverable	Water	3005A	
400-132918-5	FB-1	Total Recoverable	Water	3005A	
400-132918-6	FERB-1	Total Recoverable	Water	3005A	
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132731-C-9-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-132731-C-9-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 339698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total/NA	Water	7470A	
400-132918-2	GWA-3A	Total/NA	Water	7470A	
400-132918-3	GWA-5	Total/NA	Water	7470A	
400-132918-4	GWA-7	Total/NA	Water	7470A	
400-132918-5	FB-1	Total/NA	Water	7470A	
400-132918-6	FERB-1	Total/NA	Water	7470A	
MB 400-339698/14-A	Method Blank	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Metals (Continued)

Prep Batch: 339698 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-339698/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132829-C-2-D MS	Matrix Spike	Total/NA	Water	7470A	
400-132829-C-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 339805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total Recoverable	Water	6020	339670
400-132918-2	GWA-3A	Total Recoverable	Water	6020	339670
400-132918-3	GWA-5	Total Recoverable	Water	6020	339670
400-132918-4	GWA-7	Total Recoverable	Water	6020	339670
400-132918-5	FB-1	Total Recoverable	Water	6020	339670
400-132918-6	FERB-1	Total Recoverable	Water	6020	339670
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	6020	339670
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	6020	339670
400-132731-C-9-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	339670
400-132731-C-9-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	339670

Prep Batch: 339826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-7	GWA-3B	Total/NA	Water	7470A	
400-132918-8	GWC-1	Total/NA	Water	7470A	
400-132918-9	GWC-2	Total/NA	Water	7470A	
400-132918-10	GWC-5	Total/NA	Water	7470A	
MB 400-339826/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339826/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132918-8 MS	GWC-1	Total/NA	Water	7470A	
400-132918-8 MSD	GWC-1	Total/NA	Water	7470A	
400-132918-9 DU	GWC-2	Total/NA	Water	7470A	

Prep Batch: 339997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-7	GWA-3B	Total Recoverable	Water	3005A	
400-132918-8	GWC-1	Total Recoverable	Water	3005A	
400-132918-9	GWC-2	Total Recoverable	Water	3005A	
400-132918-10	GWC-5	Total Recoverable	Water	3005A	
MB 400-339997/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339997/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-133053-D-3-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-133053-D-3-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-132918-9 DU	GWC-2	Total Recoverable	Water	3005A	

Analysis Batch: 340341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total/NA	Water	7470A	339698
400-132918-2	GWA-3A	Total/NA	Water	7470A	339698
400-132918-3	GWA-5	Total/NA	Water	7470A	339698
400-132918-4	GWA-7	Total/NA	Water	7470A	339698
400-132918-5	FB-1	Total/NA	Water	7470A	339698
400-132918-6	FERB-1	Total/NA	Water	7470A	339698
400-132918-7	GWA-3B	Total/NA	Water	7470A	339826
400-132918-8	GWC-1	Total/NA	Water	7470A	339826

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Metals (Continued)

Analysis Batch: 340341 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-9	GWC-2	Total/NA	Water	7470A	339826
400-132918-10	GWC-5	Total/NA	Water	7470A	339826
MB 400-339698/14-A	Method Blank	Total/NA	Water	7470A	339698
MB 400-339826/14-A	Method Blank	Total/NA	Water	7470A	339826
LCS 400-339698/15-A	Lab Control Sample	Total/NA	Water	7470A	339698
LCS 400-339826/15-A	Lab Control Sample	Total/NA	Water	7470A	339826
400-132829-C-2-D MS	Matrix Spike	Total/NA	Water	7470A	339698
400-132829-C-2-E MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	339698
400-132918-8 MS	GWC-1	Total/NA	Water	7470A	339826
400-132918-8 MSD	GWC-1	Total/NA	Water	7470A	339826
400-132918-9 DU	GWC-2	Total/NA	Water	7470A	339826

Analysis Batch: 340403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-7	GWA-3B	Total Recoverable	Water	6020	339997
400-132918-8	GWC-1	Total Recoverable	Water	6020	339997
400-132918-9	GWC-2	Total Recoverable	Water	6020	339997
400-132918-10	GWC-5	Total Recoverable	Water	6020	339997
MB 400-339997/1-A ^5	Method Blank	Total Recoverable	Water	6020	339997
LCS 400-339997/2-A	Lab Control Sample	Total Recoverable	Water	6020	339997
400-133053-D-3-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	339997
400-133053-D-3-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	339997
400-132918-9 DU	GWC-2	Total Recoverable	Water	6020	339997

General Chemistry

Analysis Batch: 339614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total/NA	Water	SM 2540C	
400-132918-2	GWA-3A	Total/NA	Water	SM 2540C	
400-132918-3	GWA-5	Total/NA	Water	SM 2540C	
400-132918-4	GWA-7	Total/NA	Water	SM 2540C	
400-132918-5	FB-1	Total/NA	Water	SM 2540C	
400-132918-6	FERB-1	Total/NA	Water	SM 2540C	
MB 400-339614/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339614/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132918-4 DU	GWA-7	Total/NA	Water	SM 2540C	

Analysis Batch: 339896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-7	GWA-3B	Total/NA	Water	SM 2540C	
400-132918-8	GWC-1	Total/NA	Water	SM 2540C	
MB 400-339896/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339896/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132918-7 DU	GWA-3B	Total/NA	Water	SM 2540C	

Analysis Batch: 340187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-9	GWC-2	Total/NA	Water	SM 2540C	
400-132918-10	GWC-5	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

General Chemistry (Continued)

Analysis Batch: 340187 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-340187/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340187/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132918-9 DU	GWC-2	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-340301/4
Matrix: Water
Analysis Batch: 340301

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/30/17 11:05	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 11:05	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 11:05	1

Lab Sample ID: LCS 400-340301/5
Matrix: Water
Analysis Batch: 340301

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.2		mg/L		102	90 - 110
Fluoride	10.0	10.8		mg/L		108	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

Lab Sample ID: LCSD 400-340301/6
Matrix: Water
Analysis Batch: 340301

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	10.7		mg/L		107	90 - 110	1	15
Sulfate	10.0	10.6		mg/L		106	90 - 110	1	15

Lab Sample ID: 400-132918-1 MS
Matrix: Water
Analysis Batch: 340301

Client Sample ID: GWA-4
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	14.2		mg/L		96	80 - 120
Fluoride	0.089	J	10.0	10.5		mg/L		105	80 - 120
Sulfate	6.3		10.0	16.6		mg/L		103	80 - 120

Lab Sample ID: 400-132918-1 MSD
Matrix: Water
Analysis Batch: 340301

Client Sample ID: GWA-4
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	14.2		mg/L		96	80 - 120	0	20
Fluoride	0.089	J	10.0	10.5		mg/L		104	80 - 120	0	20
Sulfate	6.3		10.0	16.6		mg/L		103	80 - 120	0	20

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 340301

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	5.4		5.45		mg/L		0.2	20
Fluoride	<0.082		<0.082		mg/L		NC	20
Sulfate	<0.70		<0.70		mg/L		NC	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 400-340481/4
Matrix: Water
Analysis Batch: 340481

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			01/31/17 11:33	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 11:33	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/17 11:33	1

Lab Sample ID: LCS 400-340481/5
Matrix: Water
Analysis Batch: 340481

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	9.89		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 400-340481/6
Matrix: Water
Analysis Batch: 340481

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	10.2		mg/L		102	90 - 110	0	15

Lab Sample ID: 400-132829-B-24 MS
Matrix: Water
Analysis Batch: 340481

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	30		50.0	76.4		mg/L		93	80 - 120
Fluoride	<0.41		50.0	51.9		mg/L		104	80 - 120
Sulfate	85		50.0	133		mg/L		95	80 - 120

Lab Sample ID: 400-132829-B-24 MSD
Matrix: Water
Analysis Batch: 340481

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	30		50.0	76.5		mg/L		93	80 - 120	0	20
Fluoride	<0.41		50.0	51.9		mg/L		104	80 - 120	0	20
Sulfate	85		50.0	133		mg/L		96	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339670/1-A ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 14:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 14:39	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

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

Lab Sample ID: MB 400-339670/1-A ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 14:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 14:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 14:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 14:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/25/17 08:40	01/25/17 14:39	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 14:39	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 14:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 14:39	5

Lab Sample ID: LCS 400-339670/2-A
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0512		mg/L		102	80 - 120
Barium	0.0500	0.0552		mg/L		110	80 - 120
Beryllium	0.0500	0.0533		mg/L		107	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Chromium	0.0500	0.0473		mg/L		95	80 - 120
Cobalt	0.0500	0.0472		mg/L		94	80 - 120
Copper	0.0500	0.0452		mg/L		90	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Selenium	0.0500	0.0499		mg/L		100	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Vanadium	0.0500	0.0501		mg/L		100	80 - 120
Zinc	0.0500	0.0489		mg/L		98	80 - 120
Lithium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.15		mg/L		103	80 - 120
Molybdenum	0.100	0.0971		mg/L		97	80 - 120
Boron	0.100	0.114		mg/L		114	80 - 120

Lab Sample ID: 400-132731-C-9-B MS ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0558		mg/L		112	75 - 125
Arsenic	<0.00046		0.0500	0.0521		mg/L		104	75 - 125
Barium	0.060		0.0500	0.115		mg/L		109	75 - 125
Beryllium	<0.00034		0.0500	0.0521		mg/L		104	75 - 125
Cadmium	0.0080		0.0500	0.0572		mg/L		99	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

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

Lab Sample ID: 400-132731-C-9-B MS ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chromium	<0.0011	F1 F2	0.0500	0.0482		mg/L		96		75 - 125
Cobalt	0.0032		0.0500	0.0510		mg/L		95		75 - 125
Copper	<0.0021	F1 F2	0.0500	0.0472		mg/L		94		75 - 125
Lead	<0.00035		0.0500	0.0506		mg/L		101		75 - 125
Selenium	<0.00024		0.0500	0.0505		mg/L		101		75 - 125
Thallium	<0.000085		0.0100	0.0105		mg/L		105		75 - 125
Vanadium	0.0019	J	0.0500	0.0511		mg/L		98		75 - 125
Zinc	<0.0065	F1 F2	0.0500	0.0507		mg/L		101		75 - 125
Lithium	0.0051		0.0500	0.0554		mg/L		101		75 - 125
Molybdenum	<0.00085		0.100	0.102		mg/L		102		75 - 125

Lab Sample ID: 400-132731-C-9-C MSD ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0542		mg/L		108		75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0517		mg/L		103		75 - 125	1	20
Barium	0.060		0.0500	0.115		mg/L		109		75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0524		mg/L		105		75 - 125	1	20
Cadmium	0.0080		0.0500	0.0586		mg/L		101		75 - 125	2	20
Chromium	<0.0011	F1 F2	0.0500	0.0847	F1 F2	mg/L		169		75 - 125	55	20
Cobalt	0.0032		0.0500	0.0510		mg/L		96		75 - 125	0	20
Copper	<0.0021	F1 F2	0.0500	0.0823	F1 F2	mg/L		165		75 - 125	54	20
Lead	<0.00035		0.0500	0.0515		mg/L		103		75 - 125	2	20
Selenium	<0.00024		0.0500	0.0506		mg/L		101		75 - 125	0	20
Thallium	<0.000085		0.0100	0.0104		mg/L		104		75 - 125	1	20
Vanadium	0.0019	J	0.0500	0.0514		mg/L		99		75 - 125	1	20
Zinc	<0.0065	F1 F2	0.0500	0.0807	F1 F2	mg/L		161		75 - 125	46	20
Lithium	0.0051		0.0500	0.0555		mg/L		101		75 - 125	0	20
Molybdenum	<0.00085		0.100	0.102		mg/L		102		75 - 125	0	20

Lab Sample ID: MB 400-339997/1-A ^5
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	0.00125	J	0.0025	0.0010	mg/L		01/27/17 08:50	01/30/17 14:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/27/17 08:50	01/30/17 14:23	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/27/17 08:50	01/30/17 14:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 14:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/27/17 08:50	01/30/17 14:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/27/17 08:50	01/30/17 14:23	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/27/17 08:50	01/30/17 14:23	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/27/17 08:50	01/30/17 14:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/27/17 08:50	01/30/17 14:23	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/27/17 08:50	01/30/17 14:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/27/17 08:50	01/30/17 14:23	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/27/17 08:50	01/30/17 14:23	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

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

Lab Sample ID: MB 400-339997/1-A ^5
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Zinc	<0.0065		0.020	0.0065	mg/L		01/27/17 08:50	01/30/17 14:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/27/17 08:50	01/30/17 14:23	5
Calcium	<0.13		0.25	0.13	mg/L		01/27/17 08:50	01/30/17 14:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/27/17 08:50	01/30/17 14:23	5
Boron	<0.021		0.050	0.021	mg/L		01/27/17 08:50	01/30/17 14:23	5

Lab Sample ID: LCS 400-339997/2-A
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Antimony	0.0500	0.0519		mg/L		104	80 - 120
Arsenic	0.0500	0.0503		mg/L		101	80 - 120
Barium	0.0500	0.0503		mg/L		101	80 - 120
Beryllium	0.0500	0.0487		mg/L		97	80 - 120
Cadmium	0.0500	0.0512		mg/L		102	80 - 120
Chromium	0.0500	0.0494		mg/L		99	80 - 120
Cobalt	0.0500	0.0444		mg/L		89	80 - 120
Copper	0.0500	0.0501		mg/L		100	80 - 120
Lead	0.0500	0.0459		mg/L		92	80 - 120
Selenium	0.0500	0.0500		mg/L		100	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Vanadium	0.0500	0.0493		mg/L		99	80 - 120
Zinc	0.0500	0.0506		mg/L		101	80 - 120
Lithium	0.0500	0.0500		mg/L		100	80 - 120
Calcium	5.00	4.83		mg/L		97	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Boron	0.100	0.0971		mg/L		97	80 - 120

Lab Sample ID: 400-133053-D-3-B MS ^5
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Antimony	<0.0010		0.0500	0.0503		mg/L		101	75 - 125
Arsenic	0.0015		0.0500	0.0508		mg/L		99	75 - 125
Barium	0.045		0.0500	0.0944		mg/L		99	75 - 125
Beryllium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125
Cadmium	<0.00034		0.0500	0.0510		mg/L		102	75 - 125
Chromium	0.0023	J	0.0500	0.0514		mg/L		98	75 - 125
Cobalt	0.00086	J	0.0500	0.0463		mg/L		91	75 - 125
Copper	<0.0021		0.0500	0.0530		mg/L		106	75 - 125
Lead	0.00066	J	0.0500	0.0480		mg/L		95	75 - 125
Selenium	0.00026	J	0.0500	0.0493		mg/L		98	75 - 125
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125
Vanadium	0.0087		0.0500	0.0511		mg/L		85	75 - 125
Zinc	0.039		0.0500	0.0906		mg/L		103	75 - 125
Lithium	<0.0032		0.0500	0.0488		mg/L		98	75 - 125
Calcium	6.9		5.00	11.7		mg/L		95	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

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

Lab Sample ID: 400-133053-D-3-B MS ^5
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Molybdenum	<0.00085		0.100	0.0975		mg/L		98	75 - 125
Boron	<0.021		0.100	0.108		mg/L		108	75 - 125

Lab Sample ID: 400-133053-D-3-C MSD ^5
Matrix: Water
Analysis Batch: 340403

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0497		mg/L		99	75 - 125	1	20
Arsenic	0.0015		0.0500	0.0505		mg/L		98	75 - 125	1	20
Barium	0.045		0.0500	0.0946		mg/L		100	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0499		mg/L		100	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125	2	20
Chromium	0.0023	J	0.0500	0.0529		mg/L		101	75 - 125	3	20
Cobalt	0.00086	J	0.0500	0.0468		mg/L		92	75 - 125	1	20
Copper	<0.0021		0.0500	0.0527		mg/L		105	75 - 125	0	20
Lead	0.00066	J	0.0500	0.0473		mg/L		93	75 - 125	1	20
Selenium	0.00026	J	0.0500	0.0491		mg/L		98	75 - 125	0	20
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125	1	20
Vanadium	0.0087		0.0500	0.0534		mg/L		89	75 - 125	5	20
Zinc	0.039		0.0500	0.0898		mg/L		102	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0490		mg/L		98	75 - 125	0	20
Calcium	6.9		5.00	11.8		mg/L		98	75 - 125	1	20
Molybdenum	<0.00085		0.100	0.0984		mg/L		98	75 - 125	1	20
Boron	<0.021		0.100	0.105		mg/L		105	75 - 125	3	20

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 340403

Client Sample ID: GWC-2
Prep Type: Total Recoverable
Prep Batch: 339997

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0010		<0.0010		mg/L		NC	20
Arsenic	<0.00046		<0.00046		mg/L		NC	20
Barium	0.060		0.0588		mg/L		1	20
Beryllium	<0.00034		<0.00034		mg/L		NC	20
Cadmium	<0.00034		<0.00034		mg/L		NC	20
Chromium	0.0034		0.00332		mg/L		2	20
Cobalt	0.00067	J	0.000700	J	mg/L		4	20
Copper	<0.0021		<0.0021		mg/L		NC	20
Lead	<0.00035		<0.00035		mg/L		NC	20
Selenium	<0.00024		<0.00024		mg/L		NC	20
Thallium	<0.000085		<0.000085		mg/L		NC	20
Vanadium	0.0062		0.00663		mg/L		7	20
Zinc	0.0071	J	0.00736	J	mg/L		4	20
Lithium	<0.0032		<0.0032		mg/L		NC	20
Calcium	2.9		2.91		mg/L		0.3	20
Molybdenum	<0.00085		<0.00085		mg/L		NC	20
Boron	<0.021		<0.021		mg/L		NC	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-339698/14-A
Matrix: Water
Analysis Batch: 340341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000746	J	0.00020	0.000070	mg/L		01/25/17 09:40	01/30/17 13:01	1

Lab Sample ID: LCS 400-339698/15-A
Matrix: Water
Analysis Batch: 340341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00101		mg/L		100	80 - 120

Lab Sample ID: 400-132829-C-2-D MS
Matrix: Water
Analysis Batch: 340341

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 339698

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00199		mg/L		99	80 - 120

Lab Sample ID: 400-132829-C-2-E MSD
Matrix: Water
Analysis Batch: 340341

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 339698

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	2	20

Lab Sample ID: MB 400-339826/14-A
Matrix: Water
Analysis Batch: 340341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339826

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/28/17 13:46	01/30/17 13:49	1

Lab Sample ID: LCS 400-339826/15-A
Matrix: Water
Analysis Batch: 340341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339826

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000974		mg/L		97	80 - 120

Lab Sample ID: 400-132918-8 MS
Matrix: Water
Analysis Batch: 340341

Client Sample ID: GWC-1
Prep Type: Total/NA
Prep Batch: 339826

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00201		mg/L		100	80 - 120

Lab Sample ID: 400-132918-8 MSD
Matrix: Water
Analysis Batch: 340341

Client Sample ID: GWC-1
Prep Type: Total/NA
Prep Batch: 339826

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00197		mg/L		98	80 - 120	2	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 340341

Client Sample ID: GWC-2
Prep Type: Total/NA
Prep Batch: 339826

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	<0.000070		<0.000070		mg/L		NC	20

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

Lab Sample ID: MB 400-339614/1
Matrix: Water
Analysis Batch: 339614

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/24/17 14:35	1

Lab Sample ID: LCS 400-339614/2
Matrix: Water
Analysis Batch: 339614

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	286		mg/L		98	78 - 122

Lab Sample ID: 400-132918-4 DU
Matrix: Water
Analysis Batch: 339614

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	86		86.0		mg/L		0	5

Lab Sample ID: MB 400-339896/1
Matrix: Water
Analysis Batch: 339896

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			01/26/17 12:41	1

Lab Sample ID: LCS 400-339896/2
Matrix: Water
Analysis Batch: 339896

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	302		mg/L		103	78 - 122

Lab Sample ID: 400-132918-7 DU
Matrix: Water
Analysis Batch: 339896

Client Sample ID: GWA-3B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	48		48.0		mg/L		0	5

QC Sample Results

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

TestAmerica Job ID: 400-132918-1
 SDG: Landfill #3

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

Lab Sample ID: MB 400-340187/1
Matrix: Water
Analysis Batch: 340187

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/28/17 14:45	1

Lab Sample ID: LCS 400-340187/2
Matrix: Water
Analysis Batch: 340187

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	258		mg/L		88	78 - 122

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 340187

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	28		28.0		mg/L		0	5

Chain of Custody Record

TestAmerica Pensacola
3355 McLennore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Client Information
Client Contact: Jolu Abraham
Company: Southern Company
Address: 241 Ralph McGill Blvd SE B10185
City: Atlanta
State, Zip: GA, 30308
Phone: 404-506-7239
Email: JAbraham@southernco.com
Project Name: Plant McIntosh - Landfill #3
Site: Phase II CCR & State Permit

Lab PM: Whitlire, Cheyenne R
E-Mail: cheyenne.whitlire@testamerica.com

Carrier Tracking Note:

Analysis Requested

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #:
SSOW#:

Sample ID	Sample Date	Sample Time	Type (C=comp, G=grab)	Analysis Requested
GWA-4	1/19/17	10:48	G	GW
GWA-3A	1/19/17	13:10	G	GW
GWA-5	1/19/17	12:07	G	GW
GWA-7	1/19/17	16:23	G	GW
FB-1	1/19/17	11:40	G	W
FERB-1	1/19/17	12:15	G	W

Sample Identification

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: Method of Shipment:

Relinquished by: *Cape Verde* Date: 1-20-17 Time: 1345 Company: Company

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company

Custody Seal Intact: Custody Seal No.:
 Yes No

COC No: 400-132918 Chain of Custody

Page: 1 of 1
Job #:

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - NaOH
 G - Amelcor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2CO3
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA

Barcode: 400-132918 Chain of Custody

Special Instructions/QC Requirements:

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

Relinquished by: *Cape Verde* Date: 1-20-17 Time: 1345 Company: Company

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company

Custody Seal Intact: Custody Seal No.:
 Yes No

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company

Relinquished by: Date: Time: Company: Company



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132918-1

SDG Number: Landfill #3

Login Number: 132918

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	1.6°C, 2.0°C, 0.3°C, 1.0°C, 1.8°C, 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	



Certification Summary

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

TestAmerica Job ID: 400-132918-1
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132918-2

TestAmerica Sample Delivery Group: Landfill #3

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 6:16:08 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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	15
Chronicle	16
QC Association	19
QC Sample Results	20
Chain of Custody	22
Receipt Checklists	25
Certification Summary	26

Method Summary

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

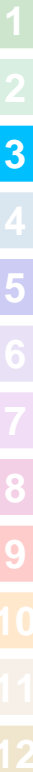
Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132918-1	GWA-4	Water	01/19/17 10:48	01/20/17 13:45
400-132918-2	GWA-3A	Water	01/19/17 13:10	01/20/17 13:45
400-132918-3	GWA-5	Water	01/19/17 12:07	01/20/17 13:45
400-132918-4	GWA-7	Water	01/19/17 16:23	01/20/17 13:45
400-132918-5	FB-1	Water	01/19/17 11:40	01/20/17 13:45
400-132918-6	FERB-1	Water	01/19/17 12:15	01/20/17 13:45
400-132918-7	GWA-3B	Water	01/23/17 14:05	01/24/17 08:00
400-132918-8	GWC-1	Water	01/23/17 16:00	01/24/17 08:00
400-132918-9	GWC-2	Water	01/24/17 11:00	01/25/17 08:00
400-132918-10	GWC-5	Water	01/24/17 12:40	01/25/17 08:00

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: GWA-4
Date Collected: 01/19/17 10:48
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-1
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	0.264		0.132	0.135	1.00	0.155	pCi/L	01/27/17 17:06	02/20/17 08:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					01/27/17 17:06	02/20/17 08:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0518	U	0.277	0.277	1.00	0.503	pCi/L	01/27/17 17:37	02/16/17 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					01/27/17 17:37	02/16/17 13:42	1
Y Carrier	71.0		40 - 110					01/27/17 17:37	02/16/17 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.213	U	0.307	0.308	5.00	0.503	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: GWA-3A

Lab Sample ID: 400-132918-2

Date Collected: 01/19/17 13:10

Matrix: Water

Date Received: 01/20/17 13:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.383		0.144	0.148	1.00	0.139	pCi/L	01/27/17 17:06	02/20/17 11:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					01/27/17 17:06	02/20/17 11:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.260	U	0.232	0.233	1.00	0.371	pCi/L	01/27/17 17:37	02/16/17 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					01/27/17 17:37	02/16/17 13:42	1
Y Carrier	84.5		40 - 110					01/27/17 17:37	02/16/17 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.643		0.272	0.276	5.00	0.371	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: GWA-5
Date Collected: 01/19/17 12:07
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-3
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	0.676		0.193	0.202	1.00	0.161	pCi/L	01/27/17 17:06	02/20/17 11:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					01/27/17 17:06	02/20/17 11:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.944		0.294	0.307	1.00	0.382	pCi/L	01/27/17 17:37	02/16/17 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					01/27/17 17:37	02/16/17 13:42	1
Y Carrier	84.1		40 - 110					01/27/17 17:37	02/16/17 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.62		0.352	0.368	5.00	0.382	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: GWA-7

Date Collected: 01/19/17 16:23

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-4

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	0.172		0.115	0.116	1.00	0.155	pCi/L	01/27/17 17:06	02/20/17 11:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					01/27/17 17:06	02/20/17 11:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.487		0.262	0.266	1.00	0.390	pCi/L	01/27/17 17:37	02/16/17 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					01/27/17 17:37	02/16/17 13:42	1
Y Carrier	84.5		40 - 110					01/27/17 17:37	02/16/17 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.659		0.287	0.290	5.00	0.390	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: FB-1
Date Collected: 01/19/17 11:40
Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-5
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	-0.0857	U	0.0719	0.0723	1.00	0.185	pCi/L	01/27/17 17:06	02/20/17 11:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					01/27/17 17:06	02/20/17 11:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.210	U	0.239	0.240	1.00	0.394	pCi/L	01/27/17 17:37	02/16/17 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					01/27/17 17:37	02/16/17 13:42	1
Y Carrier	80.7		40 - 110					01/27/17 17:37	02/16/17 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.124	U	0.250	0.251	5.00	0.394	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: FERB-1

Lab Sample ID: 400-132918-6

Date Collected: 01/19/17 12:15

Matrix: Water

Date Received: 01/20/17 13:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0274	U	0.0758	0.0758	1.00	0.143	pCi/L	01/27/17 17:06	02/20/17 11:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					01/27/17 17:06	02/20/17 11:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.398		0.256	0.258	1.00	0.393	pCi/L	01/27/17 17:37	02/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					01/27/17 17:37	02/16/17 13:43	1
Y Carrier	82.2		40 - 110					01/27/17 17:37	02/16/17 13:43	1

Method: Ra226_Ra228 - Combined Radium-226 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		0.267	0.269	5.00	0.393	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: GWA-3B

Lab Sample ID: 400-132918-7

Date Collected: 01/23/17 14:05

Matrix: Water

Date Received: 01/24/17 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	0.278		0.140	0.142	1.00	0.172	pCi/L	01/27/17 17:06	02/20/17 11:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					01/27/17 17:06	02/20/17 11:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00239	U	0.211	0.211	1.00	0.382	pCi/L	01/27/17 17:37	02/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					01/27/17 17:37	02/16/17 13:43	1
Y Carrier	83.4		40 - 110					01/27/17 17:37	02/16/17 13:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.280	U	0.253	0.254	5.00	0.382	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Client Sample ID: GWC-1
Date Collected: 01/23/17 16:00
Date Received: 01/24/17 08:00

Lab Sample ID: 400-132918-8
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	0.159	U	0.128	0.128	1.00	0.191	pCi/L	01/27/17 17:06	02/20/17 11:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					01/27/17 17:06	02/20/17 11:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0154	U	0.193	0.193	1.00	0.347	pCi/L	01/27/17 17:37	02/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					01/27/17 17:37	02/16/17 13:43	1
Y Carrier	83.7		40 - 110					01/27/17 17:37	02/16/17 13:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.174	U	0.231	0.232	5.00	0.347	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Client Sample ID: GWC-2
Date Collected: 01/24/17 11:00
Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-9
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	0.359		0.147	0.150	1.00	0.158	pCi/L	01/27/17 17:06	02/20/17 11:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					01/27/17 17:06	02/20/17 11:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.437		0.277	0.280	1.00	0.426	pCi/L	01/27/17 17:37	02/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					01/27/17 17:37	02/16/17 13:43	1
Y Carrier	82.2		40 - 110					01/27/17 17:37	02/16/17 13:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.796		0.313	0.317	5.00	0.426	pCi/L		02/21/17 11:34	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

Client Sample ID: GWC-5
Date Collected: 01/24/17 12:40
Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-10
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	2.92		0.362	0.447	1.00	0.155	pCi/L	01/27/17 17:06	02/20/17 13:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					01/27/17 17:06	02/20/17 13:07	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.91		0.404	0.485	1.00	0.340	pCi/L	01/27/17 17:37	02/16/17 13:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					01/27/17 17:37	02/16/17 13:43	1
Y Carrier	85.2		40 - 110					01/27/17 17:37	02/16/17 13:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.83		0.542	0.659	5.00	0.340	pCi/L		02/21/17 11:34	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Client Sample ID: GWA-4

Date Collected: 01/19/17 10:48

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 08:55	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: GWA-3A

Date Collected: 01/19/17 13:10

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: GWA-5

Date Collected: 01/19/17 12:07

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: GWA-7

Date Collected: 01/19/17 16:23

Date Received: 01/20/17 13:45

Lab Sample ID: 400-132918-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Client Sample ID: FB-1

Lab Sample ID: 400-132918-5

Date Collected: 01/19/17 11:40

Matrix: Water

Date Received: 01/20/17 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-132918-6

Date Collected: 01/19/17 12:15

Matrix: Water

Date Received: 01/20/17 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: GWA-3B

Lab Sample ID: 400-132918-7

Date Collected: 01/23/17 14:05

Matrix: Water

Date Received: 01/24/17 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-132918-8

Date Collected: 01/23/17 16:00

Matrix: Water

Date Received: 01/24/17 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 11:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Client Sample ID: GWC-2

Date Collected: 01/24/17 11:00

Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293387	02/20/17 11:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Client Sample ID: GWC-5

Date Collected: 01/24/17 12:40

Date Received: 01/25/17 08:00

Lab Sample ID: 400-132918-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289563	01/27/17 17:06	AS	TAL SL
Total/NA	Analysis	9315		1	293387	02/20/17 13:07	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289564	01/27/17 17:37	AS	TAL SL
Total/NA	Analysis	9320		1	292783	02/16/17 13:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Rad

Prep Batch: 289563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total/NA	Water	PrecSep-21	
400-132918-2	GWA-3A	Total/NA	Water	PrecSep-21	
400-132918-3	GWA-5	Total/NA	Water	PrecSep-21	
400-132918-4	GWA-7	Total/NA	Water	PrecSep-21	
400-132918-5	FB-1	Total/NA	Water	PrecSep-21	
400-132918-6	FERB-1	Total/NA	Water	PrecSep-21	
400-132918-7	GWA-3B	Total/NA	Water	PrecSep-21	
400-132918-8	GWC-1	Total/NA	Water	PrecSep-21	
400-132918-9	GWC-2	Total/NA	Water	PrecSep-21	
400-132918-10	GWC-5	Total/NA	Water	PrecSep-21	
MB 160-289563/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-289563/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-132918-9 DU	GWC-2	Total/NA	Water	PrecSep-21	

Prep Batch: 289564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-1	GWA-4	Total/NA	Water	PrecSep_0	
400-132918-2	GWA-3A	Total/NA	Water	PrecSep_0	
400-132918-3	GWA-5	Total/NA	Water	PrecSep_0	
400-132918-4	GWA-7	Total/NA	Water	PrecSep_0	
400-132918-5	FB-1	Total/NA	Water	PrecSep_0	
400-132918-6	FERB-1	Total/NA	Water	PrecSep_0	
400-132918-7	GWA-3B	Total/NA	Water	PrecSep_0	
400-132918-8	GWC-1	Total/NA	Water	PrecSep_0	
400-132918-9	GWC-2	Total/NA	Water	PrecSep_0	
400-132918-10	GWC-5	Total/NA	Water	PrecSep_0	
MB 160-289564/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-289564/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-132918-9 DU	GWC-2	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-289563/1-A
Matrix: Water
Analysis Batch: 293387

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289563

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05844	U	0.0873	0.0875	1.00	0.150	pCi/L	01/27/17 17:06	02/20/17 08:16	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					01/27/17 17:06	02/20/17 08:16	1

Lab Sample ID: LCS 160-289563/2-A
Matrix: Water
Analysis Batch: 293387

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289563

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	6.261		0.758	1.00	0.131	pCi/L	104	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	92.0		40 - 110						

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 293387

Client Sample ID: GWC-2
Prep Type: Total/NA
Prep Batch: 289563

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.359		0.3669		0.140	1.00	0.130	pCi/L	0.03	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	91.2		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-289564/1-A
Matrix: Water
Analysis Batch: 292785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289564

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4249		0.248	0.251	1.00	0.374	pCi/L	01/27/17 17:37	02/16/17 13:40	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					01/27/17 17:37	02/16/17 13:40	1
Y Carrier	86.0		40 - 110					01/27/17 17:37	02/16/17 13:40	1

QC Sample Results

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

TestAmerica Job ID: 400-132918-2
 SDG: Landfill #3

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

Lab Sample ID: LCS 160-289564/2-A
Matrix: Water
Analysis Batch: 292785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289564

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	15.66		1.66	1.00	0.341	pCi/L	113	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	92.0		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 292783

Client Sample ID: GWC-2
Prep Type: Total/NA
Prep Batch: 289564

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.437		0.5444		0.259	1.00	0.364	pCi/L	0.20	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	91.2		40 - 110
Y Carrier	81.9		40 - 110

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

Lab Sample ID: 400-132918-9 DU
Matrix: Water
Analysis Batch: 293688

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

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.796		0.9113		0.294	5.00	0.364	pCi/L	0.19	

Chain of Custody Record

TestAmerica Pensacola
3355 McLennore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Client Information
 Client Contact: Jolu Abraham
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State: GA 30308
 Phone: 404-506-7239
 Email: JAbraham@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: Phase II CCR & State Permit

Lab PM: Whitlire, Cheyenne R
E-Mail: cheyenne.whitlire@testamerica.com

Sampler: C. Hurdle, M. Rogers M.R.
Phone:

Carrier Tracking Note:

COC No:
Page: 1 of 1
Job #:

Analysis Requested

Due Date Requested: TAT Requested (days):

PO #:

WO #:

Project #:

SSOW#:

Preservation Codes:
 A - HCL M - Hexane
 B - NaOH N - None
 C - Zn Acetate O - As/NiO2
 D - Nitric Acid P - Na2CO3
 E - NaHSO4 Q - Na2SO3
 F - NaOH R - Na2S2O3
 G - Amelcor S - H2SO4
 H - Ascorbic Acid T - TSP Dodecahydrate
 I - Ice U - Acetone
 J - DI Water V - MCAA

Barcode: 400-132918 Chain of Custody

Notes:

Sample Identification	Sample Date	Sample Time	Type (C=comp, G=grab)	Analysis Requested	Preservation Code
GWA-4	1/19/17	10:48	G	GW	X
GWA-3A	1/19/17	13:10	G	GW	X
GWA-5	1/19/17	12:07	G	GW	X
GWA-7	1/19/17	16:23	G	GW	X
FB-1	1/19/17	11:40	G	W	X
FERB-1	1/19/17	12:15	G	W	X

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: Method of Shipment:

Relinquished by: Cape Verde Date: 1-20-17/1345 Company

Relinquished by: Date: Time: Company

Relinquished by: Date: Time: Company

Custody Seal Intact: Custody Seal No.:
 A Yes A No

Special Instructions/QC Requirements: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For: Mon

Recovery By: Date/Time: 1-20-17 13:45 Company
 Cooler Temperature(s) °C and °F: 16.7/16 2.0/2.0



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 200
 Jacksonville, FL 32225

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 #3
 Site: Phase II CCR & State Permit

Lab PM: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com
 T. Payne TP
 Phone:

Center Tracking No(s):
 Page:
 Job #:

Analysis Requested

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #: 0372382
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (G=Glass, Q=Quartz, B=Buttress, A=Asst)	Preservation Code:	Total Number of Containers										Special Instructions/Note:								
						Field Filtered Sample (Yes or No)	Reform (MSM/SP/VR/NO)	TDS - SM 2940C; Cl, F, SO4 - EPA 300	Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9316 & 9320	Metals - State Permit (EPA 6020)	Cu, V, Zn	1	2	3		4	5	6	7	8	9	10	11
GWA-3B	1/23/17	14:05	G	GW		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GWC-1	1/23/17	16:00	G	GW		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: _____ Date/Time: 1/17/17 Company: EPA
 _____ Date/Time: 02/17/17 Company: Saw.
 _____ Date/Time: 02/17/17 Company: Saw.

Relinquished by: _____ Date/Time: 02/17/17 Company: Saw.
 _____ Date/Time: 02/17/17 Company: Saw.

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

Cooler Temperature(s) °C and Other Remarks: 0.3°C

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. Payne TP
 Phone: Whitire, Cheyenne R.
 Lab P.M.: Whitire, Cheyenne R.
 E-Mail: cheyenne.whitire@testamericainc.com

Southern Company
 Address: 42 Inverness Center Parkway BIN B426
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: LIMPETTY@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: Phase II CCR & State Permit

Sample Identification	Sample Date	Sample Time	Type (C=Comp, G=grab)	Preservation Codes		Special Instructions/Note
				(G=water, S=solid, O=volatile, B=trace, A=As)	(M=Hexane, N=None, O=AsNaO2, P=Na2O4S, Q=Na2SO3, R=Na2SO3, S=H2SO4, H=Ascorbic Acid, T=TSP Dodecahydrate, U=Acetone, V=MCAA, W=ph 4-5, K=EDTA, L=EDA, Z=other (specify))	
GWC-2	1/24/17	11:00	G	GW	X X X X	Additional Radium sample
GWC-5	1/24/17	12:40	G	GW	X X X X	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Fungus B Unknown Radiologic

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [Signature] Date: 1/24/17 Time: 8:00
 Relinquished by: [Signature] Date: 1/24/17 Time: 8:00
 Relinquished by: [Signature] Date: 1/24/17 Time: 8:00

Custody Seal: Intact [Signature] No. [Signature] Seal No. [Signature]

Cooler Temperature(s) °C and Other Remarks: 0.0°C, 4.8°C, 50.2°C



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132918-2

SDG Number: Landfill #3

Login Number: 132918

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	1.6°C, 2.0°C, 0.3°C, 1.0°C, 1.8°C, 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	

Certification Summary

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

TestAmerica Job ID: 400-132918-2
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132918-2
SDG: Landfill #3

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-132918-3

TestAmerica Sample Delivery Group: Landfill #3

Client Project/Site: CCR - Plant McIntosh

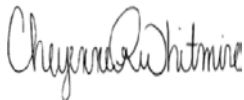
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 7:07:36 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	6
Sample Summary	7
Client Sample Results	8
Definitions	14
Chronicle	15
QC Association	17
QC Sample Results	20
Chain of Custody	27
Receipt Checklists	29
Certification Summary	30

Case Narrative

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Job ID: 400-132918-3

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-132918-3

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 340456 and analytical batch 340674 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-4A

Lab Sample ID: 400-132918-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	34		2.5	0.49	ug/L	5		6020	Total Recoverable
Cobalt	0.47	J	2.5	0.40	ug/L	5		6020	Total Recoverable
Calcium	370		250	130	ug/L	5		6020	Total Recoverable
Boron	23	J	50	21	ug/L	5		6020	Total Recoverable
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-4B

Lab Sample ID: 400-132918-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	77		2.5	0.49	ug/L	5		6020	Total Recoverable
Cobalt	0.56	J	2.5	0.40	ug/L	5		6020	Total Recoverable
Lead	0.71	J	1.3	0.35	ug/L	5		6020	Total Recoverable
Calcium	890		250	130	ug/L	5		6020	Total Recoverable
Boron	30	J	50	21	ug/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-132918-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16		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	35		2.5	0.49	ug/L	5		6020	Total Recoverable
Cobalt	0.43	J	2.5	0.40	ug/L	5		6020	Total Recoverable
Calcium	350		250	130	ug/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-132918-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	46		2.5	0.49	ug/L	5		6020	Total Recoverable
Cobalt	0.52	J	2.5	0.40	ug/L	5		6020	Total Recoverable
Lithium	8.5		5.0	3.2	ug/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: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-6 (Continued)

Lab Sample ID: 400-132918-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	1400		250	130	ug/L	5		6020	Total
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: FB-2

Lab Sample ID: 400-132918-15

No Detections.

Client Sample ID: FERB-2

Lab Sample ID: 400-132918-16

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: 400-132918-3
SDG: Landfill #3

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: 400-132918-3
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132918-11	GWC-4A	Water	01/25/17 14:50	01/26/17 07:52
400-132918-12	GWC-4B	Water	01/25/17 16:20	01/26/17 07:52
400-132918-13	DUP-1	Water	01/25/17 00:00	01/26/17 07:52
400-132918-14	GWC-6	Water	01/27/17 11:30	01/27/17 15:28
400-132918-15	FB-2	Water	01/27/17 11:50	01/27/17 15:28
400-132918-16	FERB-2	Water	01/27/17 12:00	01/27/17 15:28

- 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: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-4A

Lab Sample ID: 400-132918-11

Date Collected: 01/25/17 14:50

Matrix: Water

Date Received: 01/26/17 07:52

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.89	mg/L			01/31/17 17:39	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 17:39	1
Sulfate	1.8		1.0	0.70	mg/L			01/31/17 17:39	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		01/30/17 09:15	01/31/17 12:40	5
Arsenic	<0.46		1.3	0.46	ug/L		01/30/17 09:15	01/31/17 12:40	5
Barium	34		2.5	0.49	ug/L		01/30/17 09:15	01/31/17 12:40	5
Beryllium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:40	5
Cadmium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:40	5
Chromium	<1.1		2.5	1.1	ug/L		01/30/17 09:15	01/31/17 12:40	5
Cobalt	0.47	J	2.5	0.40	ug/L		01/30/17 09:15	01/31/17 12:40	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/30/17 09:15	01/31/17 12:40	5
Lead	<0.35		1.3	0.35	ug/L		01/30/17 09:15	01/31/17 12:40	5
Selenium	<0.24		1.3	0.24	ug/L		01/30/17 09:15	01/31/17 12:40	5
Thallium	<0.085		0.50	0.085	ug/L		01/30/17 09:15	01/31/17 12:40	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/30/17 09:15	01/31/17 12:40	5
Lithium	<3.2		5.0	3.2	ug/L		01/30/17 09:15	01/31/17 12:40	5
Calcium	370		250	130	ug/L		01/30/17 09:15	01/31/17 12:40	5
Molybdenum	<0.85		15	0.85	ug/L		01/30/17 09:15	01/31/17 12:40	5
Boron	23	J	50	21	ug/L		01/30/17 09:15	01/31/17 12:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/30/17 09:15	02/01/17 13:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/30/17 10:24	02/01/17 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			01/28/17 15:40	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-4B
Date Collected: 01/25/17 16:20
Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-12
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		1.0	0.89	mg/L			01/31/17 18:01	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 18:01	1
Sulfate	11		1.0	0.70	mg/L			01/31/17 18:01	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		01/30/17 09:15	01/31/17 12:45	5
Arsenic	<0.46		1.3	0.46	ug/L		01/30/17 09:15	01/31/17 12:45	5
Barium	77		2.5	0.49	ug/L		01/30/17 09:15	01/31/17 12:45	5
Beryllium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:45	5
Cadmium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:45	5
Chromium	<1.1		2.5	1.1	ug/L		01/30/17 09:15	01/31/17 12:45	5
Cobalt	0.56	J	2.5	0.40	ug/L		01/30/17 09:15	01/31/17 12:45	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/30/17 09:15	01/31/17 12:45	5
Lead	0.71	J	1.3	0.35	ug/L		01/30/17 09:15	01/31/17 12:45	5
Selenium	<0.24		1.3	0.24	ug/L		01/30/17 09:15	01/31/17 12:45	5
Thallium	<0.085		0.50	0.085	ug/L		01/30/17 09:15	01/31/17 12:45	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/30/17 09:15	01/31/17 12:45	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/30/17 09:15	01/31/17 12:45	5
Lithium	<3.2		5.0	3.2	ug/L		01/30/17 09:15	01/31/17 12:45	5
Calcium	890		250	130	ug/L		01/30/17 09:15	01/31/17 12:45	5
Molybdenum	<0.85		15	0.85	ug/L		01/30/17 09:15	01/31/17 12:45	5
Boron	30	J	50	21	ug/L		01/30/17 09:15	01/31/17 12:45	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		01/30/17 10:24	02/01/17 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			01/28/17 15:40	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: DUP-1

Date Collected: 01/25/17 00:00

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-13

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		1.0	0.89	mg/L			01/31/17 18:47	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 18:47	1
Sulfate	2.0		1.0	0.70	mg/L			01/31/17 18:47	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		01/30/17 09:15	01/31/17 12:49	5
Arsenic	<0.46		1.3	0.46	ug/L		01/30/17 09:15	01/31/17 12:49	5
Barium	35		2.5	0.49	ug/L		01/30/17 09:15	01/31/17 12:49	5
Beryllium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:49	5
Cadmium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:49	5
Chromium	<1.1		2.5	1.1	ug/L		01/30/17 09:15	01/31/17 12:49	5
Cobalt	0.43	J	2.5	0.40	ug/L		01/30/17 09:15	01/31/17 12:49	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/30/17 09:15	01/31/17 12:49	5
Lead	<0.35		1.3	0.35	ug/L		01/30/17 09:15	01/31/17 12:49	5
Selenium	<0.24		1.3	0.24	ug/L		01/30/17 09:15	01/31/17 12:49	5
Thallium	<0.085		0.50	0.085	ug/L		01/30/17 09:15	01/31/17 12:49	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/30/17 09:15	01/31/17 12:49	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/30/17 09:15	01/31/17 12:49	5
Lithium	<3.2		5.0	3.2	ug/L		01/30/17 09:15	01/31/17 12:49	5
Calcium	350		250	130	ug/L		01/30/17 09:15	01/31/17 12:49	5
Molybdenum	<0.85		15	0.85	ug/L		01/30/17 09:15	01/31/17 12:49	5
Boron	<21		50	21	ug/L		01/30/17 09:15	01/31/17 12:49	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		01/30/17 10:24	02/01/17 13:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			01/28/17 15:40	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-6

Date Collected: 01/27/17 11:30

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-14

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			01/31/17 19:10	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 19:10	1
Sulfate	1.2		1.0	0.70	mg/L			01/31/17 19:10	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		01/31/17 11:45	02/01/17 14:12	5
Arsenic	<0.46		1.3	0.46	ug/L		01/31/17 11:45	02/01/17 14:12	5
Barium	46		2.5	0.49	ug/L		01/31/17 11:45	02/01/17 14:12	5
Beryllium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:12	5
Cadmium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:12	5
Chromium	<1.1		2.5	1.1	ug/L		01/31/17 11:45	02/01/17 14:12	5
Cobalt	0.52	J	2.5	0.40	ug/L		01/31/17 11:45	02/01/17 14:12	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/31/17 11:45	02/01/17 14:12	5
Lead	<0.35		1.3	0.35	ug/L		01/31/17 11:45	02/01/17 14:12	5
Selenium	<0.24		1.3	0.24	ug/L		01/31/17 11:45	02/01/17 14:12	5
Thallium	<0.085		0.50	0.085	ug/L		01/31/17 11:45	02/01/17 14:12	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/31/17 11:45	02/01/17 14:12	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/31/17 11:45	02/01/17 14:12	5
Lithium	8.5		5.0	3.2	ug/L		01/31/17 11:45	02/01/17 14:12	5
Calcium	1400		250	130	ug/L		01/31/17 11:45	02/01/17 14:12	5
Molybdenum	<0.85		15	0.85	ug/L		01/31/17 11:45	02/01/17 14:12	5
Boron	<21		50	21	ug/L		01/31/17 11:45	02/01/17 14:12	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/31/17 12:26	02/01/17 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			01/31/17 14:32	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: FB-2

Date Collected: 01/27/17 11:50

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-15

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			01/31/17 19:33	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 19:33	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/17 19:33	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		01/31/17 11:45	02/01/17 14:16	5
Arsenic	<0.46		1.3	0.46	ug/L		01/31/17 11:45	02/01/17 14:16	5
Barium	<0.49		2.5	0.49	ug/L		01/31/17 11:45	02/01/17 14:16	5
Beryllium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:16	5
Cadmium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:16	5
Chromium	<1.1		2.5	1.1	ug/L		01/31/17 11:45	02/01/17 14:16	5
Cobalt	<0.40		2.5	0.40	ug/L		01/31/17 11:45	02/01/17 14:16	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/31/17 11:45	02/01/17 14:16	5
Lead	<0.35		1.3	0.35	ug/L		01/31/17 11:45	02/01/17 14:16	5
Selenium	<0.24		1.3	0.24	ug/L		01/31/17 11:45	02/01/17 14:16	5
Thallium	<0.085		0.50	0.085	ug/L		01/31/17 11:45	02/01/17 14:16	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/31/17 11:45	02/01/17 14:16	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/31/17 11:45	02/01/17 14:16	5
Lithium	<3.2		5.0	3.2	ug/L		01/31/17 11:45	02/01/17 14:16	5
Calcium	<130		250	130	ug/L		01/31/17 11:45	02/01/17 14:16	5
Molybdenum	<0.85		15	0.85	ug/L		01/31/17 11:45	02/01/17 14:16	5
Boron	<21		50	21	ug/L		01/31/17 11:45	02/01/17 14:16	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/31/17 12:26	02/01/17 13:53	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			02/01/17 11:53	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: FERB-2

Lab Sample ID: 400-132918-16

Date Collected: 01/27/17 12:00

Matrix: Water

Date Received: 01/27/17 15:28

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			01/31/17 20:41	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 20:41	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/17 20:41	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		01/31/17 11:45	02/01/17 14:20	5
Arsenic	<0.46		1.3	0.46	ug/L		01/31/17 11:45	02/01/17 14:20	5
Barium	<0.49		2.5	0.49	ug/L		01/31/17 11:45	02/01/17 14:20	5
Beryllium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:20	5
Cadmium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:20	5
Chromium	<1.1		2.5	1.1	ug/L		01/31/17 11:45	02/01/17 14:20	5
Cobalt	<0.40		2.5	0.40	ug/L		01/31/17 11:45	02/01/17 14:20	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/31/17 11:45	02/01/17 14:20	5
Lead	<0.35		1.3	0.35	ug/L		01/31/17 11:45	02/01/17 14:20	5
Selenium	<0.24		1.3	0.24	ug/L		01/31/17 11:45	02/01/17 14:20	5
Thallium	<0.085		0.50	0.085	ug/L		01/31/17 11:45	02/01/17 14:20	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/31/17 11:45	02/01/17 14:20	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/31/17 11:45	02/01/17 14:20	5
Lithium	<3.2		5.0	3.2	ug/L		01/31/17 11:45	02/01/17 14:20	5
Calcium	<130		250	130	ug/L		01/31/17 11:45	02/01/17 14:20	5
Molybdenum	<0.85		15	0.85	ug/L		01/31/17 11:45	02/01/17 14:20	5
Boron	<21		50	21	ug/L		01/31/17 11:45	02/01/17 14:20	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		01/31/17 12:26	02/01/17 13:54	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			02/01/17 11:53	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-4A

Date Collected: 01/25/17 14:50

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 17:39	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 12:40	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340674	02/01/17 13:40	DRE	TAL PEN
Total/NA	Prep	7470A			340020	01/30/17 10:24	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340686	02/01/17 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340188	01/28/17 15:40	TET	TAL PEN

Client Sample ID: GWC-4B

Date Collected: 01/25/17 16:20

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 18:01	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 12:45	DRE	TAL PEN
Total/NA	Prep	7470A			340020	01/30/17 10:24	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340686	02/01/17 13:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340188	01/28/17 15:40	TET	TAL PEN

Client Sample ID: DUP-1

Date Collected: 01/25/17 00:00

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 18:47	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 12:49	DRE	TAL PEN
Total/NA	Prep	7470A			340020	01/30/17 10:24	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340686	02/01/17 13:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340188	01/28/17 15:40	TET	TAL PEN

Client Sample ID: GWC-6

Date Collected: 01/27/17 11:30

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 19:10	KH1	TAL PEN
Total Recoverable	Prep	3005A			340456	01/31/17 11:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340674	02/01/17 14:12	DRE	TAL PEN
Total/NA	Prep	7470A			340020	01/31/17 12:26	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Client Sample ID: GWC-6

Date Collected: 01/27/17 11:30

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	340686	02/01/17 13:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340469	01/31/17 14:32	TET	TAL PEN

Client Sample ID: FB-2

Date Collected: 01/27/17 11:50

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 19:33	KH1	TAL PEN
Total Recoverable	Prep	3005A			340456	01/31/17 11:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340674	02/01/17 14:16	DRE	TAL PEN
Total/NA	Prep	7470A			340020	01/31/17 12:26	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340686	02/01/17 13:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340618	02/01/17 11:53	TET	TAL PEN

Client Sample ID: FERB-2

Date Collected: 01/27/17 12:00

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340481	01/31/17 20:41	KH1	TAL PEN
Total Recoverable	Prep	3005A			340456	01/31/17 11:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340674	02/01/17 14:20	DRE	TAL PEN
Total/NA	Prep	7470A			340020	01/31/17 12:26	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340686	02/01/17 13:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340618	02/01/17 11:53	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: 400-132918-3
SDG: Landfill #3

HPLC/IC

Analysis Batch: 340481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total/NA	Water	300.0	
400-132918-12	GWC-4B	Total/NA	Water	300.0	
400-132918-13	DUP-1	Total/NA	Water	300.0	
400-132918-14	GWC-6	Total/NA	Water	300.0	
400-132918-15	FB-2	Total/NA	Water	300.0	
400-132918-16	FERB-2	Total/NA	Water	300.0	
MB 400-340481/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340481/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340481/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132829-B-24 MS	Matrix Spike	Total/NA	Water	300.0	
400-132829-B-24 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 340020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total/NA	Water	7470A	
400-132918-12	GWC-4B	Total/NA	Water	7470A	
400-132918-13	DUP-1	Total/NA	Water	7470A	
400-132918-14	GWC-6	Total/NA	Water	7470A	
400-132918-15	FB-2	Total/NA	Water	7470A	
400-132918-16	FERB-2	Total/NA	Water	7470A	
MB 400-340020/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-340020/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-133145-B-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-133145-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 340229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11 - RA	GWC-4A	Total Recoverable	Water	3005A	
400-132918-11	GWC-4A	Total Recoverable	Water	3005A	
400-132918-12	GWC-4B	Total Recoverable	Water	3005A	
400-132918-13	DUP-1	Total Recoverable	Water	3005A	
MB 400-340229/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-340229/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-133164-D-7-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-133164-D-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 340456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-14	GWC-6	Total Recoverable	Water	3005A	
400-132918-15	FB-2	Total Recoverable	Water	3005A	
400-132918-16	FERB-2	Total Recoverable	Water	3005A	
MB 400-340456/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-340456/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-133190-K-9-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-133190-K-9-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

QC Association Summary

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Metals (Continued)

Analysis Batch: 340556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total Recoverable	Water	6020	340229
400-132918-12	GWC-4B	Total Recoverable	Water	6020	340229
400-132918-13	DUP-1	Total Recoverable	Water	6020	340229
MB 400-340229/1-A ^5	Method Blank	Total Recoverable	Water	6020	340229
LCS 400-340229/2-A	Lab Control Sample	Total Recoverable	Water	6020	340229
400-133164-D-7-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	340229
400-133164-D-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	340229

Analysis Batch: 340674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11 - RA	GWC-4A	Total Recoverable	Water	6020	340229
400-132918-14	GWC-6	Total Recoverable	Water	6020	340456
400-132918-15	FB-2	Total Recoverable	Water	6020	340456
400-132918-16	FERB-2	Total Recoverable	Water	6020	340456
MB 400-340456/1-A ^5	Method Blank	Total Recoverable	Water	6020	340456
LCS 400-340456/2-A	Lab Control Sample	Total Recoverable	Water	6020	340456
400-133190-K-9-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	340456
400-133190-K-9-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	340456

Analysis Batch: 340686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total/NA	Water	7470A	340020
400-132918-12	GWC-4B	Total/NA	Water	7470A	340020
400-132918-13	DUP-1	Total/NA	Water	7470A	340020
400-132918-14	GWC-6	Total/NA	Water	7470A	340020
400-132918-15	FB-2	Total/NA	Water	7470A	340020
400-132918-16	FERB-2	Total/NA	Water	7470A	340020
MB 400-340020/14-A	Method Blank	Total/NA	Water	7470A	340020
LCS 400-340020/15-A	Lab Control Sample	Total/NA	Water	7470A	340020
400-133145-B-1-C MS	Matrix Spike	Total/NA	Water	7470A	340020
400-133145-B-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	340020

General Chemistry

Analysis Batch: 340188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total/NA	Water	SM 2540C	
400-132918-12	GWC-4B	Total/NA	Water	SM 2540C	
400-132918-13	DUP-1	Total/NA	Water	SM 2540C	
MB 400-340188/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340188/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-133118-B-9 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 340469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-14	GWC-6	Total/NA	Water	SM 2540C	
MB 400-340469/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340469/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132918-14 DU	GWC-6	Total/NA	Water	SM 2540C	

QC Association Summary

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

General Chemistry (Continued)

Analysis Batch: 340618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-15	FB-2	Total/NA	Water	SM 2540C	
400-132918-16	FERB-2	Total/NA	Water	SM 2540C	
MB 400-340618/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340618/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-133233-A-10 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-340481/4
Matrix: Water
Analysis Batch: 340481

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			01/31/17 11:33	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 11:33	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/17 11:33	1

Lab Sample ID: LCS 400-340481/5
Matrix: Water
Analysis Batch: 340481

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	9.89		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 400-340481/6
Matrix: Water
Analysis Batch: 340481

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	10.2		mg/L		102	90 - 110	0	15

Lab Sample ID: 400-132829-B-24 MS
Matrix: Water
Analysis Batch: 340481

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	30		50.0	76.4		mg/L		93	80 - 120
Fluoride	<0.41		50.0	51.9		mg/L		104	80 - 120
Sulfate	85		50.0	133		mg/L		95	80 - 120

Lab Sample ID: 400-132829-B-24 MSD
Matrix: Water
Analysis Batch: 340481

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	30		50.0	76.5		mg/L		93	80 - 120	0	20
Fluoride	<0.41		50.0	51.9		mg/L		104	80 - 120	0	20
Sulfate	85		50.0	133		mg/L		96	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-340229/1-A ^5
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 340229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.5	1.0	ug/L		01/30/17 09:15	01/31/17 12:31	5
Arsenic	<0.46		1.3	0.46	ug/L		01/30/17 09:15	01/31/17 12:31	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

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

Lab Sample ID: MB 400-340229/1-A ^5
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 340229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.49		2.5	0.49	ug/L		01/30/17 09:15	01/31/17 12:31	5
Beryllium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:31	5
Cadmium	<0.34		2.5	0.34	ug/L		01/30/17 09:15	01/31/17 12:31	5
Chromium	<1.1		2.5	1.1	ug/L		01/30/17 09:15	01/31/17 12:31	5
Cobalt	<0.40		2.5	0.40	ug/L		01/30/17 09:15	01/31/17 12:31	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/30/17 09:15	01/31/17 12:31	5
Lead	<0.35		1.3	0.35	ug/L		01/30/17 09:15	01/31/17 12:31	5
Selenium	<0.24		1.3	0.24	ug/L		01/30/17 09:15	01/31/17 12:31	5
Thallium	<0.085		0.50	0.085	ug/L		01/30/17 09:15	01/31/17 12:31	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/30/17 09:15	01/31/17 12:31	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/30/17 09:15	01/31/17 12:31	5
Lithium	<3.2		5.0	3.2	ug/L		01/30/17 09:15	01/31/17 12:31	5
Calcium	<130		250	130	ug/L		01/30/17 09:15	01/31/17 12:31	5
Molybdenum	<0.85		15	0.85	ug/L		01/30/17 09:15	01/31/17 12:31	5
Boron	<21		50	21	ug/L		01/30/17 09:15	01/31/17 12:31	5

Lab Sample ID: LCS 400-340229/2-A
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 340229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	52.4		ug/L		105	80 - 120
Arsenic	50.0	50.8		ug/L		102	80 - 120
Barium	50.0	51.1		ug/L		102	80 - 120
Beryllium	50.0	51.5		ug/L		103	80 - 120
Cadmium	50.0	51.5		ug/L		103	80 - 120
Chromium	50.0	49.9		ug/L		100	80 - 120
Cobalt	50.0	47.6		ug/L		95	80 - 120
Copper	0.0500	0.0507		mg/L		101	80 - 120
Lead	50.0	50.6		ug/L		101	80 - 120
Selenium	50.0	49.8		ug/L		100	80 - 120
Thallium	10.0	10.2		ug/L		102	80 - 120
Vanadium	0.0500	0.0485		mg/L		97	80 - 120
Zinc	0.0500	0.0519		mg/L		104	80 - 120
Lithium	50.0	48.2		ug/L		96	80 - 120
Calcium	5000	4840		ug/L		97	80 - 120
Molybdenum	100	101		ug/L		101	80 - 120
Boron	100	103		ug/L		103	80 - 120

Lab Sample ID: 400-133164-D-7-B MS ^5
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 340229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<1.0		50.0	54.2		ug/L		108	75 - 125
Arsenic	<0.46		50.0	51.3		ug/L		103	75 - 125
Barium	12		50.0	64.3		ug/L		104	75 - 125
Beryllium	<0.34		50.0	52.5		ug/L		105	75 - 125
Cadmium	<0.34		50.0	51.0		ug/L		102	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

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

Lab Sample ID: 400-133164-D-7-B MS ^5
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 340229

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chromium	<1.1		50.0	50.3		ug/L		101	75 - 125	
Cobalt	<0.40		50.0	52.2		ug/L		104	75 - 125	
Copper	<0.0021		0.0500	0.0517		mg/L		103	75 - 125	
Lead	<0.35		50.0	50.6		ug/L		101	75 - 125	
Selenium	<0.24		50.0	50.2		ug/L		100	75 - 125	
Thallium	<0.085		10.0	10.2		ug/L		102	75 - 125	
Vanadium	0.0054		0.0500	0.0514		mg/L		92	75 - 125	
Zinc	<0.0065		0.0500	0.0531		mg/L		106	75 - 125	
Lithium	5.4		50.0	54.5		ug/L		98	75 - 125	
Calcium	870		5000	5860		ug/L		100	75 - 125	
Molybdenum	<0.85		100	102		ug/L		102	75 - 125	
Boron	140		100	260		ug/L		120	75 - 125	

Lab Sample ID: 400-133164-D-7-C MSD ^5
Matrix: Water
Analysis Batch: 340556

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 340229

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<1.0		50.0	53.5		ug/L		107	75 - 125	1	20	
Arsenic	<0.46		50.0	51.5		ug/L		103	75 - 125	0	20	
Barium	12		50.0	63.9		ug/L		103	75 - 125	1	20	
Beryllium	<0.34		50.0	52.9		ug/L		106	75 - 125	1	20	
Cadmium	<0.34		50.0	51.6		ug/L		103	75 - 125	1	20	
Chromium	<1.1		50.0	51.2		ug/L		102	75 - 125	2	20	
Cobalt	<0.40		50.0	52.4		ug/L		105	75 - 125	0	20	
Copper	<0.0021		0.0500	0.0523		mg/L		105	75 - 125	1	20	
Lead	<0.35		50.0	50.8		ug/L		102	75 - 125	0	20	
Selenium	<0.24		50.0	50.0		ug/L		100	75 - 125	0	20	
Thallium	<0.085		10.0	10.2		ug/L		102	75 - 125	0	20	
Vanadium	0.0054		0.0500	0.0529		mg/L		95	75 - 125	3	20	
Zinc	<0.0065		0.0500	0.0542		mg/L		108	75 - 125	2	20	
Lithium	5.4		50.0	53.8		ug/L		97	75 - 125	1	20	
Calcium	870		5000	5760		ug/L		98	75 - 125	2	20	
Molybdenum	<0.85		100	99.9		ug/L		100	75 - 125	2	20	
Boron	140		100	257		ug/L		117	75 - 125	1	20	

Lab Sample ID: MB 400-340456/1-A ^5
Matrix: Water
Analysis Batch: 340674

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 340456

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<1.0		2.5	1.0	ug/L		01/31/17 11:45	02/01/17 14:03	5
Arsenic	<0.46		1.3	0.46	ug/L		01/31/17 11:45	02/01/17 14:03	5
Barium	<0.49		2.5	0.49	ug/L		01/31/17 11:45	02/01/17 14:03	5
Beryllium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:03	5
Cadmium	<0.34		2.5	0.34	ug/L		01/31/17 11:45	02/01/17 14:03	5
Chromium	<1.1		2.5	1.1	ug/L		01/31/17 11:45	02/01/17 14:03	5
Cobalt	<0.40		2.5	0.40	ug/L		01/31/17 11:45	02/01/17 14:03	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/31/17 11:45	02/01/17 14:03	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

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

Lab Sample ID: MB 400-340456/1-A ^5
Matrix: Water
Analysis Batch: 340674

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 340456

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.35		1.3	0.35	ug/L		01/31/17 11:45	02/01/17 14:03	5
Selenium	<0.24		1.3	0.24	ug/L		01/31/17 11:45	02/01/17 14:03	5
Thallium	<0.085		0.50	0.085	ug/L		01/31/17 11:45	02/01/17 14:03	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/31/17 11:45	02/01/17 14:03	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/31/17 11:45	02/01/17 14:03	5
Lithium	<3.2		5.0	3.2	ug/L		01/31/17 11:45	02/01/17 14:03	5
Calcium	<130		250	130	ug/L		01/31/17 11:45	02/01/17 14:03	5
Molybdenum	<0.85		15	0.85	ug/L		01/31/17 11:45	02/01/17 14:03	5
Boron	<21		50	21	ug/L		01/31/17 11:45	02/01/17 14:03	5

Lab Sample ID: LCS 400-340456/2-A
Matrix: Water
Analysis Batch: 340674

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 340456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	51.2		ug/L		102	80 - 120
Arsenic	50.0	51.4		ug/L		103	80 - 120
Barium	50.0	50.7		ug/L		101	80 - 120
Beryllium	50.0	51.7		ug/L		103	80 - 120
Cadmium	50.0	51.7		ug/L		103	80 - 120
Chromium	50.0	51.0		ug/L		102	80 - 120
Cobalt	50.0	47.3		ug/L		95	80 - 120
Copper	0.0500	0.0516		mg/L		103	80 - 120
Lead	50.0	53.5		ug/L		107	80 - 120
Selenium	50.0	51.3		ug/L		103	80 - 120
Thallium	10.0	10.3		ug/L		103	80 - 120
Vanadium	0.0500	0.0512		mg/L		102	80 - 120
Zinc	0.0500	0.0481		mg/L		96	80 - 120
Lithium	50.0	52.1		ug/L		104	80 - 120
Calcium	5000	4980		ug/L		100	80 - 120
Molybdenum	100	103		ug/L		103	80 - 120
Boron	100	104		ug/L		104	80 - 120

Lab Sample ID: 400-133190-K-9-B MS ^5
Matrix: Water
Analysis Batch: 340674

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 340456

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<1.0		50.0	52.6		ug/L		105	75 - 125
Arsenic	84		50.0	140		ug/L		110	75 - 125
Barium	780		50.0	833	4	ug/L		107	75 - 125
Beryllium	<0.34		50.0	54.7		ug/L		109	75 - 125
Cadmium	<0.34		50.0	52.3		ug/L		105	75 - 125
Chromium	<1.1		50.0	51.5		ug/L		103	75 - 125
Cobalt	0.93	J	50.0	51.2		ug/L		101	75 - 125
Copper	<0.0021		0.0500	0.0518		mg/L		104	75 - 125
Lead	<0.35		50.0	54.1		ug/L		108	75 - 125
Selenium	0.40	J	50.0	52.8		ug/L		105	75 - 125
Thallium	<0.085		10.0	10.5		ug/L		105	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

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

Lab Sample ID: 400-133190-K-9-B MS ^5
Matrix: Water
Analysis Batch: 340674

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 340456

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Vanadium	0.0022	J	0.0500	0.0544		mg/L		104		75 - 125
Zinc	<0.0065	F1	0.0500	0.0381		mg/L		76		75 - 125
Lithium	17		50.0	67.6		ug/L		101		75 - 125
Molybdenum	4.4	J	100	110		ug/L		105		75 - 125
Boron	74		100	185		ug/L		111		75 - 125

Lab Sample ID: 400-133190-K-9-C MSD ^5
Matrix: Water
Analysis Batch: 340674

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 340456

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<1.0		50.0	51.0		ug/L		102		75 - 125	3	20
Arsenic	84		50.0	137		ug/L		105		75 - 125	2	20
Barium	780		50.0	824	4	ug/L		90		75 - 125	1	20
Beryllium	<0.34		50.0	53.8		ug/L		108		75 - 125	2	20
Cadmium	<0.34		50.0	50.9		ug/L		102		75 - 125	3	20
Chromium	<1.1		50.0	52.1		ug/L		104		75 - 125	1	20
Cobalt	0.93	J	50.0	52.5		ug/L		103		75 - 125	3	20
Copper	<0.0021		0.0500	0.0523		mg/L		105		75 - 125	1	20
Lead	<0.35		50.0	54.8		ug/L		110		75 - 125	1	20
Selenium	0.40	J	50.0	53.6		ug/L		106		75 - 125	2	20
Thallium	<0.085		10.0	10.6		ug/L		106		75 - 125	1	20
Vanadium	0.0022	J	0.0500	0.0543		mg/L		104		75 - 125	0	20
Zinc	<0.0065	F1	0.0500	0.0372	F1	mg/L		74		75 - 125	2	20
Lithium	17		50.0	68.1		ug/L		103		75 - 125	1	20
Molybdenum	4.4	J	100	109		ug/L		104		75 - 125	1	20
Boron	74		100	192		ug/L		118		75 - 125	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-340020/14-A
Matrix: Water
Analysis Batch: 340686

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340020

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		01/27/17 09:16	02/01/17 13:09	1

Lab Sample ID: LCS 400-340020/15-A
Matrix: Water
Analysis Batch: 340686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340020

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Mercury	0.00101	0.00111		mg/L		111		80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-133145-B-1-C MS
Matrix: Water
Analysis Batch: 340686

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 340020

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: 400-133145-B-1-D MSD
Matrix: Water
Analysis Batch: 340686

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 340020

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00228		mg/L		113	80 - 120	6	20

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

Lab Sample ID: MB 400-340188/1
Matrix: Water
Analysis Batch: 340188

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/28/17 15:40	1

Lab Sample ID: LCS 400-340188/2
Matrix: Water
Analysis Batch: 340188

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	258		mg/L		88	78 - 122

Lab Sample ID: 400-133118-B-9 DU
Matrix: Water
Analysis Batch: 340188

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	140		140		mg/L		0	5

Lab Sample ID: MB 400-340469/1
Matrix: Water
Analysis Batch: 340469

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/31/17 14:32	1

Lab Sample ID: LCS 400-340469/2
Matrix: Water
Analysis Batch: 340469

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	282		mg/L		96	78 - 122

QC Sample Results

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

TestAmerica Job ID: 400-132918-3
 SDG: Landfill #3

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

Lab Sample ID: 400-132918-14 DU
Matrix: Water
Analysis Batch: 340469

Client Sample ID: GWC-6
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

Lab Sample ID: MB 400-340618/1
Matrix: Water
Analysis Batch: 340618

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			02/01/17 11:53	1

Lab Sample ID: LCS 400-340618/2
Matrix: Water
Analysis Batch: 340618

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	284		mg/L		97	78 - 122

Lab Sample ID: 400-133233-A-10 DU
Matrix: Water
Analysis Batch: 340618

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	460		472		mg/L		2	5

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132918-3

SDG Number: Landfill #3

Login Number: 132918

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	1.6°C, 2.0°C, 0.3°C, 1.0°C, 1.8°C, 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	

Certification Summary

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

TestAmerica Job ID: 400-132918-3
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-132918-4

TestAmerica Sample Delivery Group: Landfill 3

Client Project/Site: CCR - Plant McIntosh

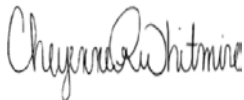
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/27/2017 6:52:14 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	11
Chronicle	12
QC Association	14
QC Sample Results	15
Chain of Custody	18
Receipt Checklists	20
Certification Summary	21

Case Narrative

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Job ID: 400-132918-4

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132918-4

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-290357: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWC-4A (400-132918-11), GWC-4B (400-132918-12) and DUP-1 (400-132918-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-290759: Insufficient sample volume was available to perform a sample duplicate (DU). An LCS/LCSD was prepared to demonstrate batch precision. FB-2 (400-132918-15) and FERB-2 (400-132918-16)

Method(s) PrecSep-21: Radium-226 Prep Batch 160-290300: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWC-4A (400-132918-11), GWC-4B (400-132918-12) and DUP-1 (400-132918-13). 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 160-290764: Insufficient sample volume was available to perform a sample duplicate (DU). An LCS/LCSD was prepared to demonstrate batch precision. FB-2 (400-132918-15) and FERB-2 (400-132918-16)

Method Summary

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132918-11	GWC-4A	Water	01/25/17 14:50	01/26/17 07:52
400-132918-12	GWC-4B	Water	01/25/17 16:20	01/26/17 07:52
400-132918-13	DUP-1	Water	01/25/17 00:00	01/26/17 07:52
400-132918-15	FB-2	Water	01/27/17 11:50	01/27/17 15:28
400-132918-16	FERB-2	Water	01/27/17 12:00	01/27/17 15:28

- 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: 400-132918-4
 SDG: Landfill 3

Client Sample ID: GWC-4A

Lab Sample ID: 400-132918-11

Date Collected: 01/25/17 14:50

Matrix: Water

Date Received: 01/26/17 07:52

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.432		0.224	0.227	1.00	0.272	pCi/L	01/31/17 11:54	02/22/17 08:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					01/31/17 11:54	02/22/17 08:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.715		0.317	0.323	1.00	0.456	pCi/L	01/31/17 17:58	02/20/17 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					01/31/17 17:58	02/20/17 15:49	1
Y Carrier	85.6		40 - 110					01/31/17 17:58	02/20/17 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.388	0.395	5.00	0.456	pCi/L		02/27/17 17:22	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-4
 SDG: Landfill 3

Client Sample ID: GWC-4B
Date Collected: 01/25/17 16:20
Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-12
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	0.405		0.233	0.236	1.00	0.305	pCi/L	01/31/17 11:54	02/22/17 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110					01/31/17 11:54	02/22/17 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.552		0.281	0.286	1.00	0.411	pCi/L	01/31/17 17:58	02/20/17 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110					01/31/17 17:58	02/20/17 15:49	1
Y Carrier	87.5		40 - 110					01/31/17 17:58	02/20/17 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.957		0.365	0.370	5.00	0.411	pCi/L		02/27/17 17:22	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Client Sample ID: DUP-1

Lab Sample ID: 400-132918-13

Date Collected: 01/25/17 00:00

Matrix: Water

Date Received: 01/26/17 07:52

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.530		0.232	0.237	1.00	0.261	pCi/L	01/31/17 11:54	02/22/17 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					01/31/17 11:54	02/22/17 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.07		0.301	0.317	1.00	0.365	pCi/L	01/31/17 17:58	02/20/17 15:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					01/31/17 17:58	02/20/17 15:49	1
Y Carrier	85.2		40 - 110					01/31/17 17:58	02/20/17 15:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.60		0.380	0.395	5.00	0.365	pCi/L		02/27/17 17:22	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Client Sample ID: FB-2
Date Collected: 01/27/17 11:50
Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-15
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	0.201		0.123	0.124	1.00	0.168	pCi/L	02/02/17 11:22	02/27/17 05:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					02/02/17 11:22	02/27/17 05:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.240	U	0.226	0.227	1.00	0.364	pCi/L	02/02/17 10:42	02/23/17 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					02/02/17 10:42	02/23/17 10:43	1
Y Carrier	80.7		40 - 110					02/02/17 10:42	02/23/17 10:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.441		0.257	0.259	5.00	0.364	pCi/L		02/27/17 17:22	1

Client Sample Results

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

TestAmerica Job ID: 400-132918-4
 SDG: Landfill 3

Client Sample ID: FERB-2

Lab Sample ID: 400-132918-16

Date Collected: 01/27/17 12:00

Matrix: Water

Date Received: 01/27/17 15:28

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0247	U	0.0606	0.0606	1.00	0.145	pCi/L	02/02/17 11:22	02/27/17 05:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					02/02/17 11:22	02/27/17 05:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.545		0.293	0.297	1.00	0.436	pCi/L	02/02/17 10:42	02/23/17 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					02/02/17 10:42	02/23/17 10:43	1
Y Carrier	81.5		40 - 110					02/02/17 10:42	02/23/17 10:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.520		0.299	0.304	5.00	0.436	pCi/L		02/27/17 17:22	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Client Sample ID: GWC-4A

Date Collected: 01/25/17 14:50

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290300	01/31/17 11:54	AS	TAL SL
Total/NA	Analysis	9315		1	293875	02/22/17 08:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290357	01/31/17 17:58	AS	TAL SL
Total/NA	Analysis	9320		1	293437	02/20/17 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294834	02/27/17 17:22	RTM	TAL SL

Client Sample ID: GWC-4B

Date Collected: 01/25/17 16:20

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290300	01/31/17 11:54	AS	TAL SL
Total/NA	Analysis	9315		1	293875	02/22/17 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290357	01/31/17 17:58	AS	TAL SL
Total/NA	Analysis	9320		1	293437	02/20/17 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294834	02/27/17 17:22	RTM	TAL SL

Client Sample ID: DUP-1

Date Collected: 01/25/17 00:00

Date Received: 01/26/17 07:52

Lab Sample ID: 400-132918-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290300	01/31/17 11:54	AS	TAL SL
Total/NA	Analysis	9315		1	293875	02/22/17 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290357	01/31/17 17:58	AS	TAL SL
Total/NA	Analysis	9320		1	293437	02/20/17 15:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294834	02/27/17 17:22	RTM	TAL SL

Client Sample ID: FB-2

Date Collected: 01/27/17 11:50

Date Received: 01/27/17 15:28

Lab Sample ID: 400-132918-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290764	02/02/17 11:22	MBC	TAL SL
Total/NA	Analysis	9315		1	294479	02/27/17 05:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290759	02/02/17 10:42	MBC	TAL SL
Total/NA	Analysis	9320		1	294105	02/23/17 10:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294834	02/27/17 17:22	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Client Sample ID: FERB-2

Lab Sample ID: 400-132918-16

Date Collected: 01/27/17 12:00

Matrix: Water

Date Received: 01/27/17 15:28

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290764	02/02/17 11:22	MBC	TAL SL
Total/NA	Analysis	9315		1	294479	02/27/17 05:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290759	02/02/17 10:42	MBC	TAL SL
Total/NA	Analysis	9320		1	294105	02/23/17 10:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294834	02/27/17 17:22	RTM	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Rad

Prep Batch: 290300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total/NA	Water	PrecSep-21	
400-132918-12	GWC-4B	Total/NA	Water	PrecSep-21	
400-132918-13	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-290300/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-290300/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-290300/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 290357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-11	GWC-4A	Total/NA	Water	PrecSep_0	
400-132918-12	GWC-4B	Total/NA	Water	PrecSep_0	
400-132918-13	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-290357/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-290357/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-290357/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 290759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-15	FB-2	Total/NA	Water	PrecSep_0	
400-132918-16	FERB-2	Total/NA	Water	PrecSep_0	
MB 160-290759/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-290759/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-290759/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 290764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132918-15	FB-2	Total/NA	Water	PrecSep-21	
400-132918-16	FERB-2	Total/NA	Water	PrecSep-21	
MB 160-290764/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-290764/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-290764/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

QC Sample Results

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-290300/1-A
Matrix: Water
Analysis Batch: 293874

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290300

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.2275	U	0.206	0.207	1.00	0.312	pCi/L	01/31/17 11:54	02/22/17 06:38	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110					01/31/17 11:54	02/22/17 06:38	1

Lab Sample ID: LCS 160-290300/2-A
Matrix: Water
Analysis Batch: 293874

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290300

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	6.01	7.791		1.10	1.00	0.322	pCi/L	130	68 - 137		
Carrier	LCS LCS		Limits								
Ba Carrier	78.8		40 - 110								

Lab Sample ID: LCSD 160-290300/3-A
Matrix: Water
Analysis Batch: 294100

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290300

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	6.01	7.964		1.04	1.00	0.251	pCi/L	133	68 - 137	0.08	1
Carrier	LCSD LCSD		Limits								
Ba Carrier	76.7		40 - 110								

Lab Sample ID: MB 160-290764/1-A
Matrix: Water
Analysis Batch: 294479

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290764

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.03253	U	0.0686	0.0687	1.00	0.126	pCi/L	02/02/17 11:22	02/27/17 05:20	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					02/02/17 11:22	02/27/17 05:20	1

Lab Sample ID: LCS 160-290764/2-A
Matrix: Water
Analysis Batch: 294479

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290764

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	6.01	6.866		0.807	1.00	0.133	pCi/L	114	68 - 137		

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-4
 SDG: Landfill 3

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

Lab Sample ID: LCS 160-290764/2-A
Matrix: Water
Analysis Batch: 294479

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290764

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.8		40 - 110

Lab Sample ID: LCSD 160-290764/3-A
Matrix: Water
Analysis Batch: 294479

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290764

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	6.01	7.230		0.846	1.00	0.142	pCi/L	120	68 - 137	0.22	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	92.6		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-290357/1-A
Matrix: Water
Analysis Batch: 293437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290357

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.01401	U	0.307	0.307	1.00	0.544	pCi/L	01/31/17 17:58	02/20/17 15:47	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110	01/31/17 17:58	02/20/17 15:47	1
Y Carrier	78.5		40 - 110	01/31/17 17:58	02/20/17 15:47	1

Lab Sample ID: LCS 160-290357/2-A
Matrix: Water
Analysis Batch: 293437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290357

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	17.88		1.94	1.00	0.541	pCi/L	129	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	78.8		40 - 110
Y Carrier	83.0		40 - 110

Lab Sample ID: LCSD 160-290357/3-A
Matrix: Water
Analysis Batch: 293437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290357

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.8	17.17		1.87	1.00	0.486	pCi/L	124	56 - 140	0.19	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

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

Lab Sample ID: LCSD 160-290357/3-A
Matrix: Water
Analysis Batch: 293437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290357

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	76.7		40 - 110
Y Carrier	85.6		40 - 110

Lab Sample ID: MB 160-290759/1-A
Matrix: Water
Analysis Batch: 294105

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290759

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2168	U	0.268	0.269	1.00	0.443	pCi/L	02/02/17 10:42	02/23/17 10:42	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110	02/02/17 10:42	02/23/17 10:42	1
Y Carrier	78.5		40 - 110	02/02/17 10:42	02/23/17 10:42	1

Lab Sample ID: LCS 160-290759/2-A
Matrix: Water
Analysis Batch: 294105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290759

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	15.02		1.61	1.00	0.361	pCi/L	109	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.8		40 - 110
Y Carrier	84.9		40 - 110

Lab Sample ID: LCSD 160-290759/3-A
Matrix: Water
Analysis Batch: 294105

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 290759

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.8	16.87		1.80	1.00	0.400	pCi/L	122	56 - 140	0.54	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	92.6		40 - 110
Y Carrier	80.0		40 - 110

TestAmerica Pensacola
 3355 McClamore 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
 E-Mail: cheyenne.whitmire@testamericainc.com
 Sample: T. Payne TP
 Phone: _____

Client Information
 Southern Company
 Address: 42 Inverness Center Parkway BIN B426
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: LMPETTY@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: Phase II CCR & State Permit

Analysis Requested

TDS - SM 2540C; Cl, F, SO4 - EPA 300									
Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470									
Metals State Permit (EPA 6020)									
Cu, V, Zn									

Sample Identification	Sample Date	Sample Time	Type (C-Comp, G-grab)	Preservation Code	Analysis Requested	Special Instructions/Note
GWC-6	1/27/17	11:30	G	GW		No Radium sample taken; insufficient volume
FB-2	1/27/17	11:50	G	W		
FERB-2	1/27/17	12:00	G	W		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify) _____

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: _____ Date/Time: 1/27/17 15:30 Company: _____

Relinquished by: _____ Date/Time: 01/30/17 13:11 Company: _____

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

Custody Seal No.: _____
 A Yes A No

Received by: V. Suckers Company: TA
 Date/Time: 1-27-17 15:28
 Received by: _____ Date/Time: 01/31/17 Company: TRINC
 Received by: _____ Date/Time: _____ Company: _____

Method of Shipment: _____
 Return To Client Disposal By Lab Archive For _____ Month

Special Instructions/QC Requirements: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Cooler Temperature(s) °C and Other Remarks: 1.5 / 1.5 3.8 IR-2



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132918-4

SDG Number: Landfill 3

Login Number: 132918

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	1.6°C, 2.0°C, 0.3°C, 1.0°C, 1.8°C, 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	

Certification Summary

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

TestAmerica Job ID: 400-132918-4
 SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-132918-4
SDG: Landfill 3

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-133466-1

TestAmerica Sample Delivery Group: Landfill #3

Client Project/Site: CCR - Plant McIntosh

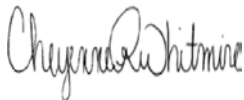
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 4:58:01 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	8
Chronicle	9
QC Association	10
QC Sample Results	11
Chain of Custody	14
Receipt Checklists	15
Certification Summary	16

Case Narrative

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

TestAmerica Job ID: 400-133466-1
SDG: Landfill #3

Job ID: 400-133466-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-133466-1

Metals

Method(s) 6020: The initial calibration verification (ICV) standard for batch 341975 expired on the analytical date. All ICV results were within the control limit. Sample results have been reported as qualified data.

Method(s) 7470A: The method blank for prep batch 341216 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-133466-1
 SDG: Landfill #3

Client Sample ID: GWC-3

Lab Sample ID: 400-133466-1

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	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0034		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00054	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0092		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	54		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: 400-133466-1
SDG: Landfill #3

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: 400-133466-1
SDG: Landfill #3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-133466-1	GWC-3	Water	02/02/17 10:20	02/03/17 16:56

- 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: 400-133466-1
SDG: Landfill #3

Client Sample ID: GWC-3
Date Collected: 02/02/17 10:20
Date Received: 02/03/17 16:56

Lab Sample ID: 400-133466-1
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			02/09/17 11:23	1
Fluoride	<0.082		0.20	0.082	mg/L			02/09/17 11:23	1
Sulfate	<0.70		1.0	0.70	mg/L			02/09/17 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		02/08/17 09:00	02/10/17 11:20	5
Copper	<0.0021		0.0025	0.0021	mg/L		02/08/17 09:00	02/10/17 11:20	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/08/17 09:00	02/10/17 11:20	5
Barium	0.044		0.0025	0.00049	mg/L		02/08/17 09:00	02/10/17 11:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/08/17 09:00	02/10/17 11:20	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		02/08/17 09:00	02/10/17 11:20	5
Boron	<0.021		0.050	0.021	mg/L		02/08/17 09:00	02/10/17 11:20	5
Zinc	<0.0065		0.020	0.0065	mg/L		02/08/17 09:00	02/10/17 11:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/08/17 09:00	02/10/17 11:20	5
Calcium	2.2		0.25	0.13	mg/L		02/08/17 09:00	02/10/17 11:20	5
Chromium	0.0034		0.0025	0.0011	mg/L		02/08/17 09:00	02/10/17 11:20	5
Cobalt	0.00054	J	0.0025	0.00040	mg/L		02/08/17 09:00	02/10/17 11:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/08/17 09:00	02/10/17 11:20	5
Lithium	0.0092		0.0050	0.0032	mg/L		02/08/17 09:00	02/10/17 11:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/08/17 09:00	02/10/17 11:20	5
Selenium	0.00047	J	0.0013	0.00024	mg/L		02/08/17 09:00	02/10/17 11:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/08/17 09:00	02/10/17 11:20	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		02/08/17 08:59	02/09/17 12:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			02/07/17 14:40	1

Definitions/Glossary

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

TestAmerica Job ID: 400-133466-1
SDG: Landfill #3

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: 400-133466-1
SDG: Landfill #3

Client Sample ID: GWC-3

Date Collected: 02/02/17 10:20

Date Received: 02/03/17 16:56

Lab Sample ID: 400-133466-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	341603	02/09/17 11:23	KH1	TAL PEN
Total Recoverable	Prep	3005A			341286	02/08/17 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	341975	02/10/17 11:20	DRE	TAL PEN
Total/NA	Prep	7470A			341216	02/08/17 08:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	341658	02/09/17 12:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341280	02/07/17 14:40	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: 400-133466-1
SDG: Landfill #3

HPLC/IC

Analysis Batch: 341603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133466-1	GWC-3	Total/NA	Water	300.0	
MB 400-341603/4	Method Blank	Total/NA	Water	300.0	
LCS 400-341603/5	Lab Control Sample	Total/NA	Water	300.0	
LCS D 400-341603/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133466-1 MS	GWC-3	Total/NA	Water	300.0	
400-133466-1 MSD	GWC-3	Total/NA	Water	300.0	

Metals

Prep Batch: 341216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133466-1	GWC-3	Total/NA	Water	7470A	
MB 400-341216/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-341216/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-133400-B-11-E MS	Matrix Spike	Total/NA	Water	7470A	
400-133400-B-11-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 341286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133466-1	GWC-3	Total Recoverable	Water	3005A	
MB 400-341286/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-341286/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 341658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133466-1	GWC-3	Total/NA	Water	7470A	341216
MB 400-341216/14-A	Method Blank	Total/NA	Water	7470A	341216
LCS 400-341216/15-A	Lab Control Sample	Total/NA	Water	7470A	341216
400-133400-B-11-E MS	Matrix Spike	Total/NA	Water	7470A	341216
400-133400-B-11-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	341216

Analysis Batch: 341975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133466-1	GWC-3	Total Recoverable	Water	6020	341286
MB 400-341286/1-A ^5	Method Blank	Total Recoverable	Water	6020	341286
LCS 400-341286/2-A	Lab Control Sample	Total Recoverable	Water	6020	341286

General Chemistry

Analysis Batch: 341280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133466-1	GWC-3	Total/NA	Water	SM 2540C	
MB 400-341280/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-341280/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-133530-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-133466-1
SDG: Landfill #3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-341603/4
Matrix: Water
Analysis Batch: 341603

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/09/17 10:14	1
Fluoride	<0.082		0.20	0.082	mg/L			02/09/17 10:14	1
Sulfate	<0.70		1.0	0.70	mg/L			02/09/17 10:14	1

Lab Sample ID: LCS 400-341603/5
Matrix: Water
Analysis Batch: 341603

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	9.69		mg/L		97	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 400-341603/6
Matrix: Water
Analysis Batch: 341603

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.69		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	1	15
Sulfate	10.0	10.3		mg/L		103	90 - 110	0	15

Lab Sample ID: 400-133466-1 MS
Matrix: Water
Analysis Batch: 341603

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	11		10.0	19.9		mg/L		92	80 - 120
Fluoride	<0.082		10.0	10.6		mg/L		106	80 - 120
Sulfate	<0.70		10.0	10.8		mg/L		108	80 - 120

Lab Sample ID: 400-133466-1 MSD
Matrix: Water
Analysis Batch: 341603

Client Sample ID: GWC-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	11		10.0	19.9		mg/L		91	80 - 120	0	20
Fluoride	<0.082		10.0	10.6		mg/L		106	80 - 120	0	20
Sulfate	<0.70		10.0	10.8		mg/L		108	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-341286/1-A ^5
Matrix: Water
Analysis Batch: 341975

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 341286

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/08/17 09:00	02/10/17 11:11	5
Copper	<0.0021		0.0025	0.0021	mg/L		02/08/17 09:00	02/10/17 11:11	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-133466-1
 SDG: Landfill #3

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

Lab Sample ID: MB 400-341286/1-A ^5
Matrix: Water
Analysis Batch: 341975

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 341286

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/08/17 09:00	02/10/17 11:11	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/08/17 09:00	02/10/17 11:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/08/17 09:00	02/10/17 11:11	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		02/08/17 09:00	02/10/17 11:11	5
Boron	<0.021		0.050	0.021	mg/L		02/08/17 09:00	02/10/17 11:11	5
Zinc	<0.0065		0.020	0.0065	mg/L		02/08/17 09:00	02/10/17 11:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/08/17 09:00	02/10/17 11:11	5
Calcium	<0.13		0.25	0.13	mg/L		02/08/17 09:00	02/10/17 11:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/08/17 09:00	02/10/17 11:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/08/17 09:00	02/10/17 11:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/08/17 09:00	02/10/17 11:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/08/17 09:00	02/10/17 11:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/08/17 09:00	02/10/17 11:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/08/17 09:00	02/10/17 11:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/08/17 09:00	02/10/17 11:11	5

Lab Sample ID: LCS 400-341286/2-A
Matrix: Water
Analysis Batch: 341975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 341286

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0528		mg/L		106	80 - 120
Copper	0.0500	0.0530		mg/L		106	80 - 120
Arsenic	0.0500	0.0541		mg/L		108	80 - 120
Nickel	0.0500	0.0523		mg/L		105	80 - 120
Barium	0.0500	0.0528		mg/L		106	80 - 120
Silver	0.0500	0.0544		mg/L		109	80 - 120
Beryllium	0.0500	0.0545		mg/L		109	80 - 120
Vanadium	0.0500	0.0515		mg/L		103	80 - 120
Boron	0.100	0.113		mg/L		113	80 - 120
Zinc	0.0500	0.0524		mg/L		105	80 - 120
Cadmium	0.0500	0.0521		mg/L		104	80 - 120
Calcium	5.00	5.13		mg/L		103	80 - 120
Chromium	0.0500	0.0519		mg/L		104	80 - 120
Cobalt	0.0500	0.0513		mg/L		103	80 - 120
Lead	0.0500	0.0527		mg/L		105	80 - 120
Lithium	0.0500	0.0559		mg/L		112	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120
Selenium	0.0500	0.0514		mg/L		103	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-133466-1
SDG: Landfill #3

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-341216/14-A
Matrix: Water
Analysis Batch: 341658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 341216

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000763	J	0.00020	0.000070	mg/L		02/07/17 09:02	02/09/17 12:07	1

Lab Sample ID: LCS 400-341216/15-A
Matrix: Water
Analysis Batch: 341658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 341216

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00106		mg/L		106	80 - 120

Lab Sample ID: 400-133400-B-11-E MS
Matrix: Water
Analysis Batch: 341658

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 341216

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00205		mg/L		102	80 - 120

Lab Sample ID: 400-133400-B-11-F MSD
Matrix: Water
Analysis Batch: 341658

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 341216

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00199		mg/L		99	80 - 120	3	20

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

Lab Sample ID: MB 400-341280/1
Matrix: Water
Analysis Batch: 341280

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			02/07/17 14:40	1

Lab Sample ID: LCS 400-341280/2
Matrix: Water
Analysis Batch: 341280

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	270		mg/L		92	78 - 122

Lab Sample ID: 400-133530-A-3 DU
Matrix: Water
Analysis Batch: 341280

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	64		64.0		mg/L		0	5

TestAmerica Pensacola

Chain of Custody Record

TestAmerica Pensacola
8355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Client Information
Client Contact: Lauren Petty
Company: Southern Company
Address: 42 Inverness Center Parkway BIN B426
City: Birmingham
State, Zip: AL, 35242
Phone: 205-892-5417
Email: LMPETTY@southernco.com
Project Name: Plant McIntosh - Landfill #3
Site: Phase II CCR & State Permit

Lab PM: Whitmore, Cherylene R
E-Mail: cherylene.whitmore@testamericainc.com
Carrier Tracking No(s):
Job #:

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #:
SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp G=grab)	Matrix (G=water, S=solid, P=paste, D=70-75% A=air)	Analysis Requested		Special Instructions/Note:
					Metals - (Part 257 Appendix III & IV) EPA 8020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 Metals State Permit (EPA 8020) Cu, V, Zn	Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP U - Acetone V - MCAA W - pH 4-5 L - EDA Z - other (specify)	
GWC-3	2/2/17	10:20	G	GW	X	X	Only Radium sample taken
GWC-6	2/2/17	11:40	G	GW	X		

400-133466

Possible Hazard Identification
 Non-Hazard
 Flammable
 Skin Irritant
 Radioactive
 Unlabeled
 Polystyrene
 Skin Irritant
 Flammable
 Skin Irritant
 Radioactive
 Unlabeled
 Polystyrene

Deliverable Requested: I, II, III, IV, Other (specify)
Empty Kit Relinquished by:
Relinquished by: [Signature]
Relinquished by: [Signature]
Relinquished by: [Signature]
Company: [Signature]
Date: 2/3/17 16:55
Received by: [Signature]
Date/Time: 2-3-17 16:54
Company: [Signature]
Date/Time: 2/17/17 8:43
Company: [Signature]
Date/Time: [Signature]
Company: [Signature]

Temperature of C and Other Remains: 1.8
Copy: [Signature]
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
Month:



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-133466-1

SDG Number: Landfill #3

Login Number: 133466

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	1.8°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: 400-133466-1
SDG: Landfill #3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-134557-1

TestAmerica Sample Delivery Group: Landfill 3

Client Project/Site: CCR - Plant McIntosh

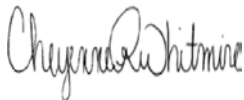
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/14/2017 6:44:04 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	9
Chronicle	10
QC Association	11
QC Sample Results	13
Chain of Custody	18
Receipt Checklists	19
Certification Summary	20

Case Narrative

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Job ID: 400-134557-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-134557-1

HPLC/IC

Method(s) 300.0: The CCB for analytical batch 344626 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 344626 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) 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-134557-1
 SDG: Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-134557-1

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
Fluoride	0.098	J B	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	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.0019	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	2.7		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	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0090		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium - RA	0.0010	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-134557-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.098	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	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00063	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0091		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium - RA	0.00040	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00015	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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: 400-134557-1
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134557-1	GWA-1A	Water	02/28/17 10:10	03/02/17 09:06
400-134557-2	GWA-2A	Water	02/28/17 12:21	03/02/17 09:06

- 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: 400-134557-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-1

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			03/06/17 23:58	1
Fluoride	0.098	J B	0.20	0.082	mg/L			03/06/17 23:58	1
Sulfate	2.7		1.0	0.70	mg/L			03/06/17 23:58	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		03/03/17 09:15	03/06/17 14:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		03/03/17 09:15	03/06/17 14:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/03/17 09:15	03/06/17 14:39	5
Barium	0.027		0.0025	0.00049	mg/L		03/03/17 09:15	03/06/17 14:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:39	5
Vanadium	0.0019	J	0.0025	0.0014	mg/L		03/03/17 09:15	03/06/17 14:39	5
Boron	<0.021		0.050	0.021	mg/L		03/03/17 09:15	03/06/17 14:39	5
Zinc	<0.0065		0.020	0.0065	mg/L		03/03/17 09:15	03/06/17 14:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:39	5
Calcium	2.7		0.25	0.13	mg/L		03/03/17 09:15	03/06/17 14:39	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		03/03/17 09:15	03/06/17 14:39	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		03/03/17 09:15	03/06/17 14:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/03/17 09:15	03/06/17 14:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/03/17 09:15	03/06/17 14:39	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0090		0.0050	0.0032	mg/L		03/03/17 09:15	03/07/17 15:05	5
Selenium	0.0010	J	0.0013	0.00024	mg/L		03/03/17 09:15	03/07/17 15:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/03/17 09:15	03/07/17 15:05	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/04/17 14:25	03/06/17 10:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		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: 400-134557-1
SDG: Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-134557-2

Date Collected: 02/28/17 12:21

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	12		1.0	0.89	mg/L			03/07/17 00:21	1
Fluoride	0.098	J B	0.20	0.082	mg/L			03/07/17 00:21	1
Sulfate	1.7		1.0	0.70	mg/L			03/07/17 00:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/03/17 09:15	03/06/17 14:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/03/17 09:15	03/06/17 14:43	5
Barium	0.041		0.0025	0.00049	mg/L		03/03/17 09:15	03/06/17 14:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:43	5
Boron	<0.021		0.050	0.021	mg/L		03/03/17 09:15	03/06/17 14:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 14:43	5
Calcium	3.8		0.25	0.13	mg/L		03/03/17 09:15	03/06/17 14:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/03/17 09:15	03/06/17 14:43	5
Cobalt	0.00063	J	0.0025	0.00040	mg/L		03/03/17 09:15	03/06/17 14:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/03/17 09:15	03/06/17 14:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/03/17 09:15	03/06/17 14:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0091		0.0050	0.0032	mg/L		03/03/17 09:15	03/07/17 15:09	5
Selenium	0.00040	J	0.0013	0.00024	mg/L		03/03/17 09:15	03/07/17 15:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/03/17 09:15	03/07/17 15:09	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 10:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		5.0	3.4	mg/L			03/04/17 15:03	1

Definitions/Glossary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
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: 400-134557-1
 SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344626	03/06/17 23:58	KH1	TAL PEN
Total Recoverable	Prep	3005A			344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344740	03/06/17 14:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344944	03/07/17 15:05	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 10:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	TET	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 02/28/17 12:21

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344626	03/07/17 00:21	KH1	TAL PEN
Total Recoverable	Prep	3005A			344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344740	03/06/17 14:43	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344283	03/03/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344944	03/07/17 15:09	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 10:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344530	03/04/17 15:03	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: 400-134557-1
SDG: Landfill 3

HPLC/IC

Analysis Batch: 344626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	300.0	
400-134557-2	GWA-2A	Total/NA	Water	300.0	
MB 400-344626/10	Method Blank	Total/NA	Water	300.0	
LCS 400-344626/11	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-344626/12	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134627-G-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-134627-G-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
400-134557-1	GWA-1A	Total/NA	Water	7470A	
400-134557-2	GWA-2A	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: 344283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total Recoverable	Water	3005A	
400-134557-1 - RA	GWA-1A	Total Recoverable	Water	3005A	
400-134557-2	GWA-2A	Total Recoverable	Water	3005A	
400-134557-2 - RA	GWA-2A	Total Recoverable	Water	3005A	
MB 400-344283/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-134562-G-21-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-134562-G-21-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 344641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	7470A	344229
400-134557-2	GWA-2A	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

Analysis Batch: 344740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total Recoverable	Water	6020	344283
400-134557-2	GWA-2A	Total Recoverable	Water	6020	344283
MB 400-344283/1-A ^5	Method Blank	Total Recoverable	Water	6020	344283
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	6020	344283
400-134562-G-21-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	344283
400-134562-G-21-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	344283

QC Association Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Metals (Continued)

Analysis Batch: 344944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1 - RA	GWA-1A	Total Recoverable	Water	6020	344283
400-134557-2 - RA	GWA-2A	Total Recoverable	Water	6020	344283
MB 400-344283/1-A ^5	Method Blank	Total Recoverable	Water	6020	344283
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	6020	344283
400-134562-G-21-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	344283
400-134562-G-21-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	344283

Analysis Batch: 345334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-344283/2-A	Lab Control Sample	Total Recoverable	Water	6020	344283

General Chemistry

Analysis Batch: 344530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	SM 2540C	
400-134557-2	GWA-2A	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	
400-134557-1 DU	GWA-1A	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-344626/10
Matrix: Water
Analysis Batch: 344626

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			03/06/17 13:42	1
Fluoride	0.0858	J	0.20	0.082	mg/L			03/06/17 13:42	1
Sulfate	<0.70		1.0	0.70	mg/L			03/06/17 13:42	1

Lab Sample ID: LCS 400-344626/11
Matrix: Water
Analysis Batch: 344626

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	10.4		mg/L		104	90 - 110

Lab Sample ID: LCSD 400-344626/12
Matrix: Water
Analysis Batch: 344626

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	0	15

Lab Sample ID: 400-134627-G-1 MS
Matrix: Water
Analysis Batch: 344626

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	210		100	315		mg/L		105	80 - 120
Fluoride	1.1	J B	100	102		mg/L		101	80 - 120
Sulfate	28		100	132		mg/L		103	80 - 120

Lab Sample ID: 400-134627-G-1 MSD
Matrix: Water
Analysis Batch: 344626

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	210		100	316		mg/L		106	80 - 120	0	20
Fluoride	1.1	J B	100	102		mg/L		101	80 - 120	0	20
Sulfate	28		100	132		mg/L		104	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-344283/1-A ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/03/17 09:15	03/06/17 11:57	5
Copper	<0.0021		0.0025	0.0021	mg/L		03/03/17 09:15	03/06/17 11:57	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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

Lab Sample ID: MB 400-344283/1-A ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/03/17 09:15	03/06/17 11:57	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/03/17 09:15	03/06/17 11:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 11:57	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		03/03/17 09:15	03/06/17 11:57	5
Boron	<0.021		0.050	0.021	mg/L		03/03/17 09:15	03/06/17 11:57	5
Zinc	<0.0065		0.020	0.0065	mg/L		03/03/17 09:15	03/06/17 11:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/03/17 09:15	03/06/17 11:57	5
Calcium	<0.13		0.25	0.13	mg/L		03/03/17 09:15	03/06/17 11:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/03/17 09:15	03/06/17 11:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/03/17 09:15	03/06/17 11:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/03/17 09:15	03/06/17 11:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/03/17 09:15	03/06/17 11:57	5

Lab Sample ID: MB 400-344283/1-A ^5
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		03/03/17 09:15	03/07/17 12:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/03/17 09:15	03/07/17 12:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/03/17 09:15	03/07/17 12:22	5

Lab Sample ID: LCS 400-344283/2-A
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0545		mg/L		109	80 - 120
Copper	0.0500	0.0504		mg/L		101	80 - 120
Arsenic	0.0500	0.0518		mg/L		104	80 - 120
Nickel	0.0500	0.0507		mg/L		101	80 - 120
Barium	0.0500	0.0509		mg/L		102	80 - 120
Silver	0.0500	0.0437		mg/L		87	80 - 120
Beryllium	0.0500	0.0483		mg/L		97	80 - 120
Vanadium	0.0500	0.0499		mg/L		100	80 - 120
Boron	0.100	0.0943		mg/L		94	80 - 120
Zinc	0.0500	0.0512		mg/L		102	80 - 120
Cadmium	0.0500	0.0526		mg/L		105	80 - 120
Calcium	5.00	5.36		mg/L		107	80 - 120
Chromium	0.0500	0.0540		mg/L		108	80 - 120
Cobalt	0.0500	0.0508		mg/L		102	80 - 120
Lead	0.0500	0.0524		mg/L		105	80 - 120
Molybdenum	0.100	0.0994		mg/L		99	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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

Lab Sample ID: LCS 400-344283/2-A
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.0500	0.0498		mg/L		100	80 - 120
Selenium	0.0500	0.0493		mg/L		99	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: LCS 400-344283/2-A
Matrix: Water
Analysis Batch: 345334

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0555		mg/L		111	80 - 120

Lab Sample ID: 400-134562-G-21-B MS ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0567		mg/L		113	75 - 125
Copper	<0.0021		0.0500	0.0539		mg/L		108	75 - 125
Arsenic	<0.00046		0.0500	0.0539		mg/L		108	75 - 125
Nickel	<0.0018		0.0500	0.0537		mg/L		107	75 - 125
Barium	0.096		0.0500	0.152		mg/L		111	75 - 125
Silver	<0.00011		0.0500	0.0463		mg/L		93	75 - 125
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125
Vanadium	0.0033		0.0500	0.0531		mg/L		100	75 - 125
Boron	<0.021		0.100	0.107		mg/L		107	75 - 125
Zinc	<0.0065		0.0500	0.0557		mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0545		mg/L		109	75 - 125
Calcium	2.0		5.00	7.89		mg/L		118	75 - 125
Chromium	<0.0011		0.0500	0.0585		mg/L		117	75 - 125
Cobalt	0.00085	J	0.0500	0.0564		mg/L		111	75 - 125
Lead	<0.00035		0.0500	0.0510		mg/L		102	75 - 125
Molybdenum	<0.00085		0.100	0.0997		mg/L		100	75 - 125

Lab Sample ID: 400-134562-G-21-B MS ^5
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lithium	<0.0032		0.0500	0.0509		mg/L		102	75 - 125
Selenium	<0.00024		0.0500	0.0485		mg/L		97	75 - 125
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125

Lab Sample ID: 400-134562-G-21-C MSD ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0551		mg/L		110	75 - 125	3	20
Copper	<0.0021		0.0500	0.0536		mg/L		107	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

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

Lab Sample ID: 400-134562-G-21-C MSD ^5
Matrix: Water
Analysis Batch: 344740

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Arsenic	<0.00046		0.0500	0.0538		mg/L		108	75 - 125	0	20
Nickel	<0.0018		0.0500	0.0527		mg/L		105	75 - 125	2	20
Barium	0.096		0.0500	0.149		mg/L		105	75 - 125	2	20
Silver	<0.00011		0.0500	0.0448		mg/L		90	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0495		mg/L		99	75 - 125	1	20
Vanadium	0.0033		0.0500	0.0520		mg/L		97	75 - 125	2	20
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125	3	20
Zinc	<0.0065		0.0500	0.0557		mg/L		111	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0541		mg/L		108	75 - 125	1	20
Calcium	2.0		5.00	7.61		mg/L		112	75 - 125	4	20
Chromium	<0.0011		0.0500	0.0585		mg/L		117	75 - 125	0	20
Cobalt	0.00085	J	0.0500	0.0551		mg/L		109	75 - 125	2	20
Lead	<0.00035		0.0500	0.0511		mg/L		102	75 - 125	0	20
Molybdenum	<0.00085		0.100	0.0991		mg/L		99	75 - 125	1	20

Lab Sample ID: 400-134562-G-21-C MSD ^5
Matrix: Water
Analysis Batch: 344944

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 344283

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Lithium	<0.0032		0.0500	0.0485		mg/L		97	75 - 125	5	20
Selenium	<0.00024		0.0500	0.0494		mg/L		99	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	1	20

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 MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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	%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	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00203		mg/L		101	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134557-1
 SDG: Landfill 3

Method: 7470A - Mercury (CVAA) (Continued)

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	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00206		mg/L		102	80 - 120	2	20

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: 400-134557-1 DU
Matrix: Water
Analysis Batch: 344530

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	74		74.0		mg/L		0	5

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Whitmore, Cheryenne R	Carrier Tracking No(s):	COC No: 680-469767.1				
Shipping/Receiving		E-Mail: cheryenne.whitmore@testamericainc.com	State of Origin: Georgia	Page: Page 1 of 1				
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):						
Address: 3355 McLemore Drive,		Due Date Requested: 3/10/2017	Preservation Codes:					
City: Pensacola		TAT Requested (days):	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:					
State/Zip: FL, 32514		PO #:	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		WO #:	Total Number of containers					
Email:		Project #:	Special Instructions/Note:					
Project Name: CCR - Plant McIntosh		40007041	LOWEST DILUTION POSSIBLE, LOWEST Dilution Possible, LOWEST DILUTION					
Site:		SSOW#:	Lowest Dilution Possible, LOWEST DILUTION POSSIBLE.					
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, AA=Air)	Field Filtered Sample (Yes or No)	Performance/MSD(Mes. or No)	Analysis Requested	Total Number of containers
GWA-1A (400-134557-1)	2/28/17	10:10 Eastern	Water	Water	X	300 ORGFM_28D/ Chloride, Fluoride & Sulfate	7470A/7470A_Prep Mercury	2
GWA-2A (400-134557-2)	2/28/17	12:21 Eastern	Water	Water	X	5b,As,Ba,Bi,Ba,Ca,Cd,Cr,Co,Pb,LI,Mo,Se,Tl		2
						6020/3005A		
						6020/3005A + Cu, V, Zn		
						2540C/ TDS		

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date/Time: 03:04H 7 1559 Saw. Company: _____ Received by: _____ Date/Time: 3/23/17 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks: 11.0C Ash



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134557-1

SDG Number: Landfill 3

Login Number: 134557

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	1.1°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Summary

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

TestAmerica Job ID: 400-134557-1
SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-134557-2

TestAmerica Sample Delivery Group: Landfill 3

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 5:12:17 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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	7
Chronicle	8
QC Association	9
QC Sample Results	10
Chain of Custody	12
Receipt Checklists	13
Certification Summary	14

Method Summary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134557-1	GWA-1A	Water	02/28/17 10:10	03/02/17 09:06
400-134557-2	GWA-2A	Water	02/28/17 12:21	03/02/17 09:06

1

2

3

4

5

6

7

8

9

10

11

12

Client Sample Results

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

TestAmerica Job ID: 400-134557-2
 SDG: Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-134557-1

Date Collected: 02/28/17 10:10

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	0.120		0.0768	0.0776	1.00	0.101	pCi/L	03/07/17 13:34	03/29/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/07/17 13:34	03/29/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.465		0.248	0.252	1.00	0.368	pCi/L	03/07/17 14:03	03/21/17 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/07/17 14:03	03/21/17 14:25	1
Y Carrier	85.1		40 - 110					03/07/17 14:03	03/21/17 14:25	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	0.585		0.260	0.264	5.00	0.368	pCi/L		03/30/17 10:03	1

Client Sample Results

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

TestAmerica Job ID: 400-134557-2
 SDG: Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-134557-2

Date Collected: 02/28/17 12:21

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	0.220		0.0978	0.0998	1.00	0.111	pCi/L	03/07/17 13:34	03/29/17 08:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/07/17 13:34	03/29/17 08:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.302	U	0.246	0.247	1.00	0.390	pCi/L	03/07/17 14:03	03/21/17 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/07/17 14:03	03/21/17 14:25	1
Y Carrier	83.2		40 - 110					03/07/17 14:03	03/21/17 14:25	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	0.522		0.264	0.267	5.00	0.390	pCi/L		03/30/17 10:03	1

Definitions/Glossary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 02/28/17 10:10

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296424	03/07/17 13:34	BME	TAL SL
Total/NA	Analysis	9315		1	300476	03/29/17 08:05	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296429	03/07/17 14:03	BME	TAL SL
Total/NA	Analysis	9320		1	298669	03/21/17 14:25	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300758	03/30/17 10:03	RTM	TAL SL

Client Sample ID: GWA-2A

Date Collected: 02/28/17 12:21

Date Received: 03/02/17 09:06

Lab Sample ID: 400-134557-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296424	03/07/17 13:34	BME	TAL SL
Total/NA	Analysis	9315		1	300476	03/29/17 08:05	MLK	TAL SL
Total/NA	Prep	PrecSep_0			296429	03/07/17 14:03	BME	TAL SL
Total/NA	Analysis	9320		1	298669	03/21/17 14:25	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300758	03/30/17 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: 400-134557-2
SDG: Landfill 3

Rad

Prep Batch: 296424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	PrecSep-21	
400-134557-2	GWA-2A	Total/NA	Water	PrecSep-21	
MB 160-296424/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-296424/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-76246-L-8-B DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 296429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134557-1	GWA-1A	Total/NA	Water	PrecSep_0	
400-134557-2	GWA-2A	Total/NA	Water	PrecSep_0	
MB 160-296429/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-296429/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-76246-L-8-D DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-296424/1-A
Matrix: Water
Analysis Batch: 300476

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296424

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04092	U	0.0542	0.0543	1.00	0.0905	pCi/L	03/07/17 13:34	03/29/17 08:03	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/07/17 13:34	03/29/17 08:03	1

Lab Sample ID: LCS 160-296424/2-A
Matrix: Water
Analysis Batch: 300476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296424

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	11.25		1.17	1.00	0.111	pCi/L	99	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.1		40 - 110						

Lab Sample ID: 240-76246-L-8-B DU
Matrix: Water
Analysis Batch: 300476

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296424

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.260		0.3544		0.116	1.00	0.0844	pCi/L	0.44	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	89.7		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-296429/1-A
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296429

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1928	U	0.229	0.230	1.00	0.379	pCi/L	03/07/17 14:03	03/21/17 14:22	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/07/17 14:03	03/21/17 14:22	1
Y Carrier	85.9		40 - 110					03/07/17 14:03	03/21/17 14:22	1

QC Sample Results

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

TestAmerica Job ID: 400-134557-2
 SDG: Landfill 3

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

Lab Sample ID: LCS 160-296429/2-A
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296429

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.7	13.78		1.49	1.00	0.359	pCi/L	101	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.1		40 - 110
Y Carrier	85.9		40 - 110

Lab Sample ID: 240-76246-L-8-D DU
Matrix: Water
Analysis Batch: 298668

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 296429

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.331		0.4595		0.245	1.00	0.353	pCi/L	0.28	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	89.7		40 - 110
Y Carrier	87.3		40 - 110

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

Lab Sample ID: 400-134503-A-7 DU
Matrix: Water
Analysis Batch: 300758

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	0.0730	U	0.3797		0.207	5.00	0.290	pCi/L	0.78	

TestAmerica Pensacola
 3355 McLennan 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: **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 #3
 Site: CCR

Lab Pk#: Whitfire, Cheyenne R
 E-Mail: cheyenne.whitfire@testamericainc.com
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#:

Sample Identification	Sample Date	Sample Time (C=Comp, G=grab)	Sample Type (C=Comp, G=grab)	Matrix (Residue, Swab, Composite)	Analysis Requested	Special Instructions/Note
GWA-1A	2/28/17	1010	G	W	TD8 SM 2540C: Cl, F, SO4 - EPA 300 Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-046 9315 & 9320	
GWA-2A	2/28/17	1221	G	W		

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: *W. H. (Sgt) [Signature]* Date: 2/28/17
 Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: _____

Company: _____
 Company: _____
 Company: _____

Method of Shipment: _____
 Date: 2/28/17
 Date: 3/2/2017
 Date: _____
 Cooler Temperature(s) °C and Other Remarks: 0.3/1.9/2.0
 1.1°C 1A-2

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134557-2

SDG Number: Landfill 3

Login Number: 134557

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	1.1°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

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

TestAmerica Job ID: 400-134557-2
SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
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: 400-134557-2
SDG: Landfill 3

Laboratory: TestAmerica St. Louis (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
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: 400-140712-1

TestAmerica Sample Delivery Group: Landfill 3

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 4:26:51 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	8
Sample Summary	9
Client Sample Results	10
Definitions	21
Chronicle	22
QC Association	26
QC Sample Results	30
Chain of Custody	37
Receipt Checklists	39
Certification Summary	40

Case Narrative

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Job ID: 400-140712-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-140712-1

Metals

Method(s) 6020: The matrix spike/ matrix pike duplicate (MS/MSD) recoveries for preparation batch 362034 and analytical batch 363123 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-140712-1

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
Arsenic	0.00050	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	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0030		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Silver	0.35	J	1.3	0.11	ug/L	5		6020	Total Recoverable
Lithium	0.0087		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0033	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0027		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	50		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-140712-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Antimony	0.0021	J	0.0025	0.0010	mg/L	5		6020	Total Recoverable
Arsenic	0.00063	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0081		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0031	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0022		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: GWA-3A

Lab Sample ID: 400-140712-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.4		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.7		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	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0010	J	0.015	0.00085	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-3A (Continued)

Lab Sample ID: 400-140712-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00067	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Beryllium - RA	0.00038	J	0.0025	0.00034	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-3B

Lab Sample ID: 400-140712-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	7.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00080	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00028	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0014	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Boron - RA	0.045	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4

Lab Sample ID: 400-140712-5

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
Sulfate	4.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.86		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00070	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-140712-6

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
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00049	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0090		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-5

Lab Sample ID: 400-140712-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00094	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.085		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00069	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00081	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0045		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0099	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Boron - RA	0.070		0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	48		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7

Lab Sample ID: 400-140712-8

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	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.95		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0062		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0083		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.016		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Vanadium	0.0025		0.0025	0.0014	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-1

Lab Sample ID: 400-140712-9

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
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.19	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Boron - RA	0.021	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-2

Lab Sample ID: 400-140712-10

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWC-2 (Continued)

Lab Sample ID: 400-140712-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	4.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0028		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00079	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0015	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Boron - RA	0.026	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-140712-11

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: 400-140712-1
SDG: Landfill 3

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: 400-140712-1
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140712-1	GWA-1A	Water	07/17/17 16:45	07/20/17 08:49
400-140712-2	GWA-2A	Water	07/18/17 10:30	07/20/17 08:49
400-140712-3	GWA-3A	Water	07/18/17 12:15	07/20/17 08:49
400-140712-4	GWA-3B	Water	07/18/17 13:35	07/20/17 08:49
400-140712-5	GWA-4	Water	07/18/17 15:35	07/20/17 08:49
400-140712-6	DUP-1	Water	07/18/17 00:00	07/20/17 08:49
400-140712-7	GWA-5	Water	07/19/17 10:40	07/21/17 08:42
400-140712-8	GWA-7	Water	07/19/17 12:00	07/21/17 08:42
400-140712-9	GWC-1	Water	07/19/17 14:10	07/21/17 08:42
400-140712-10	GWC-2	Water	07/19/17 15:30	07/21/17 08:42
400-140712-11	FERB-1	Water	07/19/17 10:45	07/21/17 08:42

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-140712-1

Date Collected: 07/17/17 16:45

Matrix: Water

Date Received: 07/20/17 08:49

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			07/21/17 18:48	1
Fluoride	<0.082		0.20	0.082	mg/L			07/21/17 18:48	1
Sulfate	<0.70		1.0	0.70	mg/L			07/21/17 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		07/28/17 10:01	08/04/17 21:45	5
Arsenic	0.00050	J	0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 21:45	5
Barium	0.022		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 21:45	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/04/17 21:45	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 21:45	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 21:45	5
Calcium	1.7		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 21:45	5
Chromium	0.0030		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 21:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 21:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 21:45	5
Silver	0.35	J	1.3	0.11	ug/L		07/28/17 10:01	08/04/17 21:45	5
Lithium	0.0087		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 21:45	5
Molybdenum	0.0033	J	0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 21:45	5
Selenium	0.0027		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 21:45	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 21:45	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 21:45	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		07/28/17 10:01	08/05/17 14:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 14:42	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	50		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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-140712-2

Date Collected: 07/18/17 10:30

Matrix: Water

Date Received: 07/20/17 08:49

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			07/21/17 19:34	1
Fluoride	<0.082		0.20	0.082	mg/L			07/21/17 19:34	1
Sulfate	<0.70		1.0	0.70	mg/L			07/21/17 19:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0021	J	0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 21:59	5
Arsenic	0.00063	J	0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 21:59	5
Barium	0.035		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 21:59	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/04/17 21:59	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 21:59	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 21:59	5
Calcium	3.1		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 21:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 21:59	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 21:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 21:59	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 21:59	5
Lithium	0.0081		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 21:59	5
Molybdenum	0.0031	J	0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 21:59	5
Selenium	0.0022		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 21:59	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 21:59	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 21:59	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		07/28/17 10:01	08/05/17 14:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 14:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 14:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	62		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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-3A

Lab Sample ID: 400-140712-3

Date Collected: 07/18/17 12:15

Matrix: Water

Date Received: 07/20/17 08:49

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		1.0	0.89	mg/L			07/21/17 19:57	1
Fluoride	<0.082		0.20	0.082	mg/L			07/21/17 19:57	1
Sulfate	<0.70		1.0	0.70	mg/L			07/21/17 19:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 22:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:04	5
Barium	0.046		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:04	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/04/17 22:04	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 22:04	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:04	5
Calcium	1.7		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:04	5
Chromium	0.0018	J	0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:04	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:04	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:04	5
Molybdenum	0.0010	J	0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:04	5
Selenium	0.00067	J	0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:04	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:04	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.00038	J	0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 14:53	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		07/25/17 10:49	07/26/17 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-3B

Lab Sample ID: 400-140712-4

Date Collected: 07/18/17 13:35

Matrix: Water

Date Received: 07/20/17 08:49

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		1.0	0.89	mg/L			07/21/17 20:20	1
Fluoride	<0.082		0.20	0.082	mg/L			07/21/17 20:20	1
Sulfate	7.1		1.0	0.70	mg/L			07/21/17 20:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 22:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:28	5
Barium	0.052		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:28	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 22:28	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:28	5
Calcium	2.8		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:28	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:28	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:28	5
Lead	0.00080	J	0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:28	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:28	5
Selenium	0.00028	J	0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:28	5
Vanadium	0.0014	J	0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:28	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:28	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		07/28/17 10:01	08/05/17 14:58	5
Boron	0.045	J	0.050	0.021	mg/L		07/28/17 10:01	08/05/17 14:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 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		07/25/17 10:49	07/26/17 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			07/20/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-4

Date Collected: 07/18/17 15:35

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-5

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			07/22/17 08:07	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 08:07	1
Sulfate	4.7		1.0	0.70	mg/L			07/22/17 08:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 22:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:32	5
Barium	0.037		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:32	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 22:32	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:32	5
Calcium	0.86		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:32	5
Cobalt	0.00070	J	0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:32	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:32	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:32	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:32	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		07/28/17 10:01	08/05/17 15:44	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/05/17 15:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 15:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 15:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 15:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			07/22/17 15:11	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: DUP-1

Date Collected: 07/18/17 00:00

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-6

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			07/22/17 08:30	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 08:30	1
Sulfate	<0.70		1.0	0.70	mg/L			07/22/17 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		07/28/17 10:01	08/04/17 22:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:37	5
Barium	0.035		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:37	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:37	5
Calcium	3.1		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:37	5
Cobalt	0.00049	J	0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:37	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:37	5
Lithium	0.0090		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:37	5
Selenium	0.00026	J	0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:37	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:37	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:37	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		07/28/17 10:01	08/05/17 15:49	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/05/17 15:49	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/05/17 15:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 15:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 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		07/25/17 10:49	07/26/17 15:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	66		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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-5
Date Collected: 07/19/17 10:40
Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.8		1.0	0.89	mg/L			07/22/17 04:19	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 04:19	1
Sulfate	12		1.0	0.70	mg/L			07/22/17 04:19	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		07/28/17 10:01	08/04/17 22:42	5
Arsenic	0.00094	J	0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:42	5
Barium	0.085		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:42	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:42	5
Calcium	2.6		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:42	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:42	5
Cobalt	0.00069	J	0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:42	5
Lead	0.00081	J	0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:42	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:42	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:42	5
Vanadium	0.0045		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:42	5
Zinc	0.0099	J	0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:42	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		07/28/17 10:01	08/05/17 15:54	5
Boron	0.070		0.050	0.021	mg/L		07/28/17 10:01	08/05/17 15:54	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/05/17 15:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 15:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 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		07/25/17 10:49	07/26/17 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			07/22/17 15:46	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-7

Date Collected: 07/19/17 12:00

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-8

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			07/22/17 04:42	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 04:42	1
Sulfate	<0.70		1.0	0.70	mg/L			07/22/17 04:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 22:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:47	5
Barium	0.013		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:47	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 22:47	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:47	5
Calcium	0.95		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:47	5
Chromium	0.0062		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:47	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:47	5
Lithium	0.0083		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:47	5
Selenium	0.016		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:47	5
Vanadium	0.0025		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:47	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:47	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		07/28/17 10:01	08/05/17 15:58	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/05/17 15:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 15:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 15:58	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	68		5.0	3.4	mg/L			07/22/17 15:46	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWC-1
Date Collected: 07/19/17 14:10
Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-9
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			07/22/17 05:05	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 05:05	1
Sulfate	<0.70		1.0	0.70	mg/L			07/22/17 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		07/28/17 10:01	08/04/17 22:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:51	5
Barium	0.013		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:51	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 22:51	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:51	5
Calcium	0.19	J	0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:51	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:51	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:51	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:51	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:51	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		07/28/17 10:01	08/05/17 16:04	5
Boron	0.021	J	0.050	0.021	mg/L		07/28/17 10:01	08/05/17 16:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 16:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 16:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			07/22/17 15:46	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWC-2
Date Collected: 07/19/17 15:30
Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-10
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		1.0	0.89	mg/L			07/22/17 05:27	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 05:27	1
Sulfate	<0.70		1.0	0.70	mg/L			07/22/17 05:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 22:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 22:56	5
Barium	0.060		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 22:56	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 22:56	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 22:56	5
Calcium	4.2		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 22:56	5
Chromium	0.0028		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 22:56	5
Cobalt	0.00079	J	0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 22:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 22:56	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 22:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 22:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 22:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 22:56	5
Vanadium	0.0015	J	0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 22:56	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 22:56	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		07/28/17 10:01	08/05/17 16:08	5
Boron	0.026	J	0.050	0.021	mg/L		07/28/17 10:01	08/05/17 16:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 16:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 16:08	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	42		5.0	3.4	mg/L			07/22/17 15:46	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: FERB-1

Lab Sample ID: 400-140712-11

Date Collected: 07/19/17 10:45

Matrix: Water

Date Received: 07/21/17 08:42

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			07/22/17 06:36	1
Fluoride	<0.082		0.20	0.082	mg/L			07/22/17 06:36	1
Sulfate	<0.70		1.0	0.70	mg/L			07/22/17 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		07/28/17 10:01	08/04/17 23:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 23:01	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 23:01	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 23:01	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 10:01	08/04/17 23:01	5
Calcium	<0.13		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 23:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 23:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 23:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 23:01	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 10:01	08/04/17 23:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 23:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 23:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 23:01	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 23:01	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 23:01	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		07/28/17 10:01	08/05/17 16:13	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/05/17 16:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 16:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 16:13	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:49	07/26/17 15:27	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			07/22/17 15:46	1

Definitions/Glossary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-1A

Date Collected: 07/17/17 16:45

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361377	07/21/17 18:48	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 21:45	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 14:42	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 14:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 07/18/17 10:30

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361377	07/21/17 19:34	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 21:59	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 14:47	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 14:59	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: GWA-3A

Date Collected: 07/18/17 12:15

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361377	07/21/17 19:57	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 14:53	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:00	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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-3B

Lab Sample ID: 400-140712-4

Date Collected: 07/18/17 13:35

Matrix: Water

Date Received: 07/20/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361377	07/21/17 20:20	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 14:58	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: GWA-4

Lab Sample ID: 400-140712-5

Date Collected: 07/18/17 15:35

Matrix: Water

Date Received: 07/20/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 08:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:32	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 15:44	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361402	07/22/17 15:11	TET	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-140712-6

Date Collected: 07/18/17 00:00

Matrix: Water

Date Received: 07/20/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 08:30	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:37	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 15:49	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:06	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: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWA-5

Date Collected: 07/19/17 10:40

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 04:19	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:42	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 15:54	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361404	07/22/17 15:46	TET	TAL PEN

Client Sample ID: GWA-7

Date Collected: 07/19/17 12:00

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 04:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:47	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 15:58	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361404	07/22/17 15:46	TET	TAL PEN

Client Sample ID: GWC-1

Date Collected: 07/19/17 14:10

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 05:05	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:51	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 16:04	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361404	07/22/17 15:46	TET	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Client Sample ID: GWC-2

Lab Sample ID: 400-140712-10

Date Collected: 07/19/17 15:30

Matrix: Water

Date Received: 07/21/17 08:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 05:27	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 22:56	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 16:08	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361404	07/22/17 15:46	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-140712-11

Date Collected: 07/19/17 10:45

Matrix: Water

Date Received: 07/21/17 08:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361439	07/22/17 06:36	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363123	08/04/17 23:01	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		362034	07/28/17 10:01	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	363171	08/05/17 16:13	DRE	TAL PEN
Total/NA	Prep	7470A			361595	07/25/17 10:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361822	07/26/17 15:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361404	07/22/17 15:46	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: 400-140712-1
SDG: Landfill 3

HPLC/IC

Analysis Batch: 361377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total/NA	Water	300.0	
400-140712-2	GWA-2A	Total/NA	Water	300.0	
400-140712-3	GWA-3A	Total/NA	Water	300.0	
400-140712-4	GWA-3B	Total/NA	Water	300.0	
MB 400-361377/4	Method Blank	Total/NA	Water	300.0	
LCS 400-361377/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-361377/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-140629-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-140629-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 361439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-5	GWA-4	Total/NA	Water	300.0	
400-140712-6	DUP-1	Total/NA	Water	300.0	
400-140712-7	GWA-5	Total/NA	Water	300.0	
400-140712-8	GWA-7	Total/NA	Water	300.0	
400-140712-9	GWC-1	Total/NA	Water	300.0	
400-140712-10	GWC-2	Total/NA	Water	300.0	
400-140712-11	FERB-1	Total/NA	Water	300.0	
MB 400-361439/34	Method Blank	Total/NA	Water	300.0	
LCS 400-361439/35	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-361439/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-140801-T-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-140801-T-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 361595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total/NA	Water	7470A	
400-140712-2	GWA-2A	Total/NA	Water	7470A	
400-140712-3	GWA-3A	Total/NA	Water	7470A	
400-140712-4	GWA-3B	Total/NA	Water	7470A	
400-140712-5	GWA-4	Total/NA	Water	7470A	
400-140712-6	DUP-1	Total/NA	Water	7470A	
400-140712-7	GWA-5	Total/NA	Water	7470A	
400-140712-8	GWA-7	Total/NA	Water	7470A	
400-140712-9	GWC-1	Total/NA	Water	7470A	
400-140712-10	GWC-2	Total/NA	Water	7470A	
400-140712-11	FERB-1	Total/NA	Water	7470A	
MB 400-361595/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-361595/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-140834-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-140834-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 361822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total/NA	Water	7470A	361595
400-140712-2	GWA-2A	Total/NA	Water	7470A	361595
400-140712-3	GWA-3A	Total/NA	Water	7470A	361595

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Metals (Continued)

Analysis Batch: 361822 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-4	GWA-3B	Total/NA	Water	7470A	361595
400-140712-5	GWA-4	Total/NA	Water	7470A	361595
400-140712-6	DUP-1	Total/NA	Water	7470A	361595
400-140712-7	GWA-5	Total/NA	Water	7470A	361595
400-140712-8	GWA-7	Total/NA	Water	7470A	361595
400-140712-9	GWC-1	Total/NA	Water	7470A	361595
400-140712-10	GWC-2	Total/NA	Water	7470A	361595
400-140712-11	FERB-1	Total/NA	Water	7470A	361595
MB 400-361595/14-A	Method Blank	Total/NA	Water	7470A	361595
LCS 400-361595/15-A	Lab Control Sample	Total/NA	Water	7470A	361595
400-140834-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	361595
400-140834-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	361595

Prep Batch: 362034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total Recoverable	Water	3005A	
400-140712-1 - RA	GWA-1A	Total Recoverable	Water	3005A	
400-140712-2 - RA	GWA-2A	Total Recoverable	Water	3005A	
400-140712-2	GWA-2A	Total Recoverable	Water	3005A	
400-140712-3 - RA	GWA-3A	Total Recoverable	Water	3005A	
400-140712-3	GWA-3A	Total Recoverable	Water	3005A	
400-140712-4 - RA	GWA-3B	Total Recoverable	Water	3005A	
400-140712-4	GWA-3B	Total Recoverable	Water	3005A	
400-140712-5 - RA	GWA-4	Total Recoverable	Water	3005A	
400-140712-5	GWA-4	Total Recoverable	Water	3005A	
400-140712-6 - RA	DUP-1	Total Recoverable	Water	3005A	
400-140712-6	DUP-1	Total Recoverable	Water	3005A	
400-140712-7 - RA	GWA-5	Total Recoverable	Water	3005A	
400-140712-7	GWA-5	Total Recoverable	Water	3005A	
400-140712-8	GWA-7	Total Recoverable	Water	3005A	
400-140712-8 - RA	GWA-7	Total Recoverable	Water	3005A	
400-140712-9	GWC-1	Total Recoverable	Water	3005A	
400-140712-9 - RA	GWC-1	Total Recoverable	Water	3005A	
400-140712-10 - RA	GWC-2	Total Recoverable	Water	3005A	
400-140712-10	GWC-2	Total Recoverable	Water	3005A	
400-140712-11	FERB-1	Total Recoverable	Water	3005A	
400-140712-11 - RA	FERB-1	Total Recoverable	Water	3005A	
MB 400-362034/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-362034/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-140887-B-4-E MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-140887-B-4-F MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 363123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total Recoverable	Water	6020	362034
400-140712-2	GWA-2A	Total Recoverable	Water	6020	362034
400-140712-3	GWA-3A	Total Recoverable	Water	6020	362034
400-140712-4	GWA-3B	Total Recoverable	Water	6020	362034
400-140712-5	GWA-4	Total Recoverable	Water	6020	362034
400-140712-6	DUP-1	Total Recoverable	Water	6020	362034
400-140712-7	GWA-5	Total Recoverable	Water	6020	362034

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Metals (Continued)

Analysis Batch: 363123 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-8	GWA-7	Total Recoverable	Water	6020	362034
400-140712-9	GWC-1	Total Recoverable	Water	6020	362034
400-140712-10	GWC-2	Total Recoverable	Water	6020	362034
400-140712-11	FERB-1	Total Recoverable	Water	6020	362034
MB 400-362034/1-A ^5	Method Blank	Total Recoverable	Water	6020	362034
LCS 400-362034/2-A	Lab Control Sample	Total Recoverable	Water	6020	362034
400-140887-B-4-E MS ^5	Matrix Spike	Total Recoverable	Water	6020	362034
400-140887-B-4-F MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	362034

Analysis Batch: 363171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1 - RA	GWA-1A	Total Recoverable	Water	6020	362034
400-140712-2 - RA	GWA-2A	Total Recoverable	Water	6020	362034
400-140712-3 - RA	GWA-3A	Total Recoverable	Water	6020	362034
400-140712-4 - RA	GWA-3B	Total Recoverable	Water	6020	362034
400-140712-5 - RA	GWA-4	Total Recoverable	Water	6020	362034
400-140712-6 - RA	DUP-1	Total Recoverable	Water	6020	362034
400-140712-7 - RA	GWA-5	Total Recoverable	Water	6020	362034
400-140712-8 - RA	GWA-7	Total Recoverable	Water	6020	362034
400-140712-9 - RA	GWC-1	Total Recoverable	Water	6020	362034
400-140712-10 - RA	GWC-2	Total Recoverable	Water	6020	362034
400-140712-11 - RA	FERB-1	Total Recoverable	Water	6020	362034
MB 400-362034/1-A ^5	Method Blank	Total Recoverable	Water	6020	362034
LCS 400-362034/2-A	Lab Control Sample	Total Recoverable	Water	6020	362034

General Chemistry

Analysis Batch: 361149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total/NA	Water	SM 2540C	
400-140712-2	GWA-2A	Total/NA	Water	SM 2540C	
400-140712-3	GWA-3A	Total/NA	Water	SM 2540C	
400-140712-4	GWA-3B	Total/NA	Water	SM 2540C	
400-140712-6	DUP-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	
400-140712-1 DU	GWA-1A	Total/NA	Water	SM 2540C	

Analysis Batch: 361402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-5	GWA-4	Total/NA	Water	SM 2540C	
MB 400-361402/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-361402/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-140784-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 361404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-7	GWA-5	Total/NA	Water	SM 2540C	
400-140712-8	GWA-7	Total/NA	Water	SM 2540C	
400-140712-9	GWC-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

General Chemistry (Continued)

Analysis Batch: 361404 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-10	GWC-2	Total/NA	Water	SM 2540C	
400-140712-11	FERB-1	Total/NA	Water	SM 2540C	
MB 400-361404/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-361404/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-140712-8 DU	GWA-7	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-361377/4
Matrix: Water
Analysis Batch: 361377

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			07/21/17 12:10	1
Fluoride	<0.082		0.20	0.082	mg/L			07/21/17 12:10	1
Sulfate	<0.70		1.0	0.70	mg/L			07/21/17 12:10	1

Lab Sample ID: LCS 400-361377/5
Matrix: Water
Analysis Batch: 361377

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.77		mg/L		98	90 - 110
Fluoride	10.0	9.85		mg/L		99	90 - 110
Sulfate	10.0	9.83		mg/L		98	90 - 110

Lab Sample ID: LCSD 400-361377/6
Matrix: Water
Analysis Batch: 361377

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	0	15
Fluoride	10.0	9.71		mg/L		97	90 - 110	1	15
Sulfate	10.0	9.86		mg/L		99	90 - 110	0	15

Lab Sample ID: 400-140629-B-1 MS
Matrix: Water
Analysis Batch: 361377

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	270		100	368		mg/L		94	80 - 120
Fluoride	3.3		100	102		mg/L		99	80 - 120
Sulfate	130		100	239		mg/L		104	80 - 120

Lab Sample ID: 400-140629-B-1 MSD
Matrix: Water
Analysis Batch: 361377

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	270		100	368		mg/L		94	80 - 120	0	20
Fluoride	3.3		100	101		mg/L		97	80 - 120	1	20
Sulfate	130		100	239		mg/L		104	80 - 120	0	20

Lab Sample ID: MB 400-361439/34
Matrix: Water
Analysis Batch: 361439

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			07/21/17 23:45	1
Fluoride	<0.082		0.20	0.082	mg/L			07/21/17 23:45	1
Sulfate	<0.70		1.0	0.70	mg/L			07/21/17 23:45	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-361439/35
Matrix: Water
Analysis Batch: 361439

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	9.73		mg/L		97	90 - 110
Fluoride	10.0	9.70		mg/L		97	90 - 110
Sulfate	10.0	9.88		mg/L		99	90 - 110

Lab Sample ID: LCSD 400-361439/36
Matrix: Water
Analysis Batch: 361439

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	9.67		mg/L		97	90 - 110	0	15
Sulfate	10.0	9.89		mg/L		99	90 - 110	0	15

Lab Sample ID: 400-140801-T-1 MS
Matrix: Water
Analysis Batch: 361439

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	E	10.0	107	E 4	mg/L		67	80 - 120
Fluoride	4.7		10.0	14.1		mg/L		94	80 - 120
Sulfate	<0.70		10.0	10.4		mg/L		104	80 - 120

Lab Sample ID: 400-140801-T-1 MSD
Matrix: Water
Analysis Batch: 361439

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	E	10.0	107	E 4	mg/L		67	80 - 120	0	20
Fluoride	4.7		10.0	14.3		mg/L		96	80 - 120	1	20
Sulfate	<0.70		10.0	10.4		mg/L		104	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-362034/1-A ^5
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/04/17 21:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/04/17 21:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/28/17 10:01	08/04/17 21:36	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/04/17 21:36	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/04/17 21:36	5
Nickel	<0.0018		0.0025	0.0018	mg/L		07/28/17 10:01	08/04/17 21:36	5
Calcium	<0.13		0.25	0.13	mg/L		07/28/17 10:01	08/04/17 21:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/04/17 21:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/04/17 21:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/04/17 21:36	5
Silver	<0.00011		0.0013	0.00011	mg/L		07/28/17 10:01	08/04/17 21:36	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

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

Lab Sample ID: MB 400-362034/1-A ^5
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/04/17 21:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/04/17 21:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 10:01	08/04/17 21:36	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/04/17 21:36	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/04/17 21:36	5

Lab Sample ID: MB 400-362034/1-A ^5
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 10:01	08/05/17 14:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 10:01	08/05/17 14:32	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/28/17 10:01	08/05/17 14:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:32	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 10:01	08/05/17 14:32	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 10:01	08/05/17 14:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 10:01	08/05/17 14:32	5
Nickel	<0.0018		0.0025	0.0018	mg/L		07/28/17 10:01	08/05/17 14:32	5
Calcium	<0.13		0.25	0.13	mg/L		07/28/17 10:01	08/05/17 14:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 10:01	08/05/17 14:32	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 10:01	08/05/17 14:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 10:01	08/05/17 14:32	5
Silver	<0.00011		0.0013	0.00011	mg/L		07/28/17 10:01	08/05/17 14:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 10:01	08/05/17 14:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 10:01	08/05/17 14:32	5
Selenium	0.000395	J	0.0013	0.00024	mg/L		07/28/17 10:01	08/05/17 14:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 10:01	08/05/17 14:32	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 10:01	08/05/17 14:32	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 10:01	08/05/17 14:32	5

Lab Sample ID: LCS 400-362034/2-A
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0529		mg/L		106	80 - 120
Arsenic	0.0500	0.0531		mg/L		106	80 - 120
Barium	0.0500	0.0472		mg/L		94	80 - 120
Boron	0.100	0.0977		mg/L		98	80 - 120
Copper	0.0500	0.0534		mg/L		107	80 - 120
Nickel	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	0.0568		mg/L		114	80 - 120
Lead	0.0500	0.0485		mg/L		97	80 - 120
Silver	0.0500	0.0528		mg/L		106	80 - 120
Lithium	0.0500	0.0487		mg/L		97	80 - 120
Molybdenum	0.100	0.104		mg/L		104	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

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

Lab Sample ID: LCS 400-362034/2-A
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	0.0500	0.0470		mg/L		94	80 - 120
Vanadium	0.0500	0.0501		mg/L		100	80 - 120
Zinc	0.0500	0.0538		mg/L		108	80 - 120

Lab Sample ID: LCS 400-362034/2-A
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0544		mg/L		109	80 - 120
Arsenic	0.0500	0.0531		mg/L		106	80 - 120
Barium	0.0500	0.0534		mg/L		107	80 - 120
Beryllium	0.0500	0.0523		mg/L		105	80 - 120
Boron	0.100	0.109		mg/L		109	80 - 120
Copper	0.0500	0.0479		mg/L		96	80 - 120
Cadmium	0.0500	0.0536		mg/L		107	80 - 120
Nickel	0.0500	0.0538		mg/L		108	80 - 120
Calcium	5.00	4.76		mg/L		95	80 - 120
Chromium	0.0500	0.0474		mg/L		95	80 - 120
Cobalt	0.0500	0.0544		mg/L		109	80 - 120
Lead	0.0500	0.0540		mg/L		108	80 - 120
Silver	0.0500	0.0531		mg/L		106	80 - 120
Lithium	0.0500	0.0533		mg/L		107	80 - 120
Molybdenum	0.100	0.106		mg/L		106	80 - 120
Selenium	0.0500	0.0522		mg/L		104	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120
Vanadium	0.0500	0.0481		mg/L		96	80 - 120
Zinc	0.0500	0.0556		mg/L		111	80 - 120

Lab Sample ID: 400-140887-B-4-E MS ^5
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 362034

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	0.0049		0.0500	0.0588		mg/L		108	75 - 125
Barium	0.052		0.0500	0.102		mg/L		100	75 - 125
Beryllium	<0.00034	^	0.0500	0.0469	^	mg/L		94	75 - 125
Boron	2.7	E ^	0.100	2.59	E 4 ^	mg/L		-56	75 - 125
Copper	<0.0021	L	0.0500	0.0514		mg/L		103	75 - 125
Cadmium	<0.00034	^	0.0500	0.0432	^	mg/L		86	75 - 125
Nickel	0.0032		0.0500	0.0540		mg/L		102	75 - 125
Calcium	330	E	5.00	281	E 4 ^	mg/L		-989	75 - 125
Chromium	<0.0011	^	0.0500	0.0450	^	mg/L		90	75 - 125
Cobalt	0.0011	J	0.0500	0.0505		mg/L		99	75 - 125
Lead	<0.00035		0.0500	0.0450	^	mg/L		90	75 - 125
Silver	<0.00011		0.0500	0.0429		mg/L		86	75 - 125
Lithium	0.037		0.0500	0.0762		mg/L		78	75 - 125
Molybdenum	0.093		0.100	0.187		mg/L		95	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
 SDG: Landfill 3

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

Lab Sample ID: 400-140887-B-4-E MS ^5
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Selenium	0.00049	J	0.0500	0.0548		mg/L		109		75 - 125
Thallium	<0.000085	^	0.0100	0.00902	^	mg/L		90		75 - 125
Vanadium	0.035	F1 ^	0.0500	0.0735	^	mg/L		77		75 - 125
Zinc	0.010	J	0.0500	0.0597		mg/L		99		75 - 125

Lab Sample ID: 400-140887-B-4-F MSD ^5
Matrix: Water
Analysis Batch: 363123

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 362034

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0494		mg/L		99		75 - 125	4	20
Arsenic	0.0049		0.0500	0.0570		mg/L		104		75 - 125	3	20
Barium	0.052		0.0500	0.0978		mg/L		91		75 - 125	5	20
Beryllium	<0.00034	^	0.0500	0.0460	^	mg/L		92		75 - 125	2	20
Boron	2.7	E ^	0.100	2.51	E 4 ^	mg/L		-142		75 - 125	3	20
Copper	<0.0021	L	0.0500	0.0497		mg/L		99		75 - 125	3	20
Cadmium	<0.00034	^	0.0500	0.0431	^	mg/L		86		75 - 125	0	20
Nickel	0.0032		0.0500	0.0526		mg/L		99		75 - 125	3	20
Calcium	330	E	5.00	275	E 4 ^	mg/L		-1112		75 - 125	2	20
Chromium	<0.0011	^	0.0500	0.0441	^	mg/L		88		75 - 125	2	20
Cobalt	0.0011	J	0.0500	0.0496		mg/L		97		75 - 125	2	20
Lead	<0.00035		0.0500	0.0439	^	mg/L		88		75 - 125	2	20
Silver	<0.00011		0.0500	0.0420		mg/L		84		75 - 125	2	20
Lithium	0.037		0.0500	0.0745		mg/L		75		75 - 125	2	20
Molybdenum	0.093		0.100	0.183		mg/L		91		75 - 125	2	20
Selenium	0.00049	J	0.0500	0.0545		mg/L		108		75 - 125	0	20
Thallium	<0.000085	^	0.0100	0.00876	^	mg/L		88		75 - 125	3	20
Vanadium	0.035	F1 ^	0.0500	0.0716	^ F1	mg/L		73		75 - 125	3	20
Zinc	0.010	J	0.0500	0.0574		mg/L		94		75 - 125	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-361595/14-A
Matrix: Water
Analysis Batch: 361822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361595

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		07/25/17 10:33	07/26/17 14:30	1

Lab Sample ID: LCS 400-361595/15-A
Matrix: Water
Analysis Batch: 361822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361595

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Mercury	0.00101	0.000939		mg/L		93		80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
SDG: Landfill 3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-140834-B-1-B MS
Matrix: Water
Analysis Batch: 361822

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 361595

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: 400-140834-B-1-C MSD
Matrix: Water
Analysis Batch: 361822

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 361595

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00194		mg/L		96	80 - 120	0	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: 400-140712-1 DU
Matrix: Water
Analysis Batch: 361149

Client Sample ID: GWA-1A
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

Lab Sample ID: MB 400-361402/1
Matrix: Water
Analysis Batch: 361402

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/22/17 15:11	1

Lab Sample ID: LCS 400-361402/2
Matrix: Water
Analysis Batch: 361402

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	300		mg/L		102	78 - 122

QC Sample Results

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

TestAmerica Job ID: 400-140712-1
 SDG: Landfill 3

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

Lab Sample ID: 400-140784-B-2 DU
Matrix: Water
Analysis Batch: 361402

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	380		376		mg/L		0	5

Lab Sample ID: MB 400-361404/1
Matrix: Water
Analysis Batch: 361404

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/22/17 15:46	1

Lab Sample ID: LCS 400-361404/2
Matrix: Water
Analysis Batch: 361404

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: 400-140712-8 DU
Matrix: Water
Analysis Batch: 361404

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	68		54.0	F3	mg/L		23	5

Chain of Custody Record

COC No:

Page: 1 of 1

Lab #:

Carrier Tracking No(s):

Lab P/N: Whitmire, Cheyenne R

E-Mail: cheyenne.whitmire@testamericainc.com

Analysis Requested

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

SSOW#:

Address: 42 Inverness Center Parkway
City: Birmingham
State, Zip: AL, 35242
Phone: 205-992-5417
Email: jimpetty@southerncco.com
Project Name: Plant McIntosh - Landfill #3
Site: CCR + State Permit

Preservation Codes:
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2SO4
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 (Water, Sewer, Stormwater, Oil, Fuel, Acid)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320		Metals State Permit EPA (6020) Cu, Ni, Sb, Ag, V, Zn		Special Instructions/Note:
					Field Filtered	MS/MSD	I	D	D	D	D	D	Total Number of Containers		
GWA-1A	7/17/17	1645	G	GW	X	X	X	X	X	X	X	X	X	3	
GWA-2A	7/18/17	1030	G	GW	X	X	X	X	X	X	X	X	X	3	
GWA-3A	7/18/17	1215	G	GW	X	X	X	X	X	X	X	X	X	3	
GWA-3B	7/18/17	1335	G	GW	X	X	X	X	X	X	X	X	X	3	
GWA-4	7/18/17	1535	G	GW	X	X	X	X	X	X	X	X	X	3	
DUP-1	7/18/17	-	G	GW	X	X	X	X	X	X	X	X	X	3	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 7/19/17 0830 Company: BSM
 Relinquished by: _____ Date/Time: 7/20/17 0840 Company: TA
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Custody Seal No.: 3904 ERY NH 1.0C FR7 NH 0.5/0.5 1-2/1.5
 Yes No

Relinquished by:	Date/Time:	Company:	Method of Shipment:
Whitmire, Cheyenne R	7/19/17 0830	BSM	
Whitmire, Cheyenne R	7/20/17 0840	TA	
Whitmire, Cheyenne R			



Chain of Custody Record

resamerica rensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Client Information
 Sampler: T. Payne Jof
 Phone:
 Lab PM: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com

Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: tmjpetty@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: CCR + State Permit

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wood, Metal, Organic, etc.)	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) Cu, Ni, Sp, Ag, V, Zn		Total Number of containers	Special Instructions/Note:
						I	D	X	D	X	X	X	X		
GWA-5	7/19/17	1040	G	GW		X		X		X		X		3	
GWA-7	7/19/17	1200	G	GW		X		X		X		X		4	extra volume for radium analysis
GWC-1	7/19/17	1410	G	GW		X		X		X		X		3	
GWC-2	7/19/17	1530	G	GW		X		X		X		X		3	
FERB-1	7/19/17	1045	G	GW		X		X		X		X		3	

Analysis Requested

Carrier Tracking No(s):

400-140712 COC

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 - EDTA
 Other:

M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *[Signature]* Date/Time: _____

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Custody Seals Intact: Yes 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/QC Requirements:

Received by: *[Signature]* Date/Time: 7-20-17 748 Company: _____

Received by: _____ Date/Time: _____ Company: _____

Received by: _____ Date/Time: _____ Company: _____

Cooling Temperature(s) °C and Other Remarks: 0.02 IR7 NH 0.3/0.6 0.2/0.5



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140712-1

SDG Number: Landfill 3

Login Number: 140712

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9°C, 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: 400-140712-1
SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-140712-2

TestAmerica Sample Delivery Group: Plant McIntosh Landfill 3

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/28/2017 11:10:45 AM

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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	16
Chronicle	17
QC Association	20
QC Sample Results	21
Chain of Custody	23
Receipt Checklists	25
Certification Summary	26

Method Summary

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140712-1	GWA-1A	Water	07/17/17 16:45	07/20/17 08:49
400-140712-2	GWA-2A	Water	07/18/17 10:30	07/20/17 08:49
400-140712-3	GWA-3A	Water	07/18/17 12:15	07/20/17 08:49
400-140712-4	GWA-3B	Water	07/18/17 13:35	07/20/17 08:49
400-140712-5	GWA-4	Water	07/18/17 15:35	07/20/17 08:49
400-140712-6	DUP-1	Water	07/18/17 00:00	07/20/17 08:49
400-140712-7	GWA-5	Water	07/19/17 10:40	07/21/17 08:42
400-140712-8	GWA-7	Water	07/19/17 12:00	07/21/17 08:42
400-140712-9	GWC-1	Water	07/19/17 14:10	07/21/17 08:42
400-140712-10	GWC-2	Water	07/19/17 15:30	07/21/17 08:42
400-140712-11	FERB-1	Water	07/19/17 10:45	07/21/17 08:42

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-140712-1

Date Collected: 07/17/17 16:45

Matrix: Water

Date Received: 07/20/17 08:49

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.129		0.0656	0.0666	1.00	0.0715	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.224	U	0.205	0.206	1.00	0.329	pCi/L	07/28/17 09:32	08/09/17 10:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					07/28/17 09:32	08/09/17 10:12	1
Y Carrier	86.4		40 - 110					07/28/17 09:32	08/09/17 10:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.354		0.215	0.216	5.00	0.329	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-140712-2

Date Collected: 07/18/17 10:30

Matrix: Water

Date Received: 07/20/17 08:49

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.169		0.0704	0.0720	1.00	0.0610	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.215	U	0.230	0.231	1.00	0.376	pCi/L	07/28/17 09:32	08/09/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					07/28/17 09:32	08/09/17 10:13	1
Y Carrier	80.7		40 - 110					07/28/17 09:32	08/09/17 10:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.384		0.241	0.242	5.00	0.376	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-3A

Lab Sample ID: 400-140712-3

Date Collected: 07/18/17 12:15

Matrix: Water

Date Received: 07/20/17 08:49

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.194		0.0777	0.0797	1.00	0.0714	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.389		0.235	0.238	1.00	0.357	pCi/L	07/28/17 09:32	08/09/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/28/17 09:32	08/09/17 10:13	1
Y Carrier	89.3		40 - 110					07/28/17 09:32	08/09/17 10:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.583		0.247	0.251	5.00	0.357	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-3B

Lab Sample ID: 400-140712-4

Date Collected: 07/18/17 13:35

Matrix: Water

Date Received: 07/20/17 08:49

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0988		0.0629	0.0635	1.00	0.0721	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.484		0.248	0.252	1.00	0.367	pCi/L	07/28/17 09:32	08/09/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/28/17 09:32	08/09/17 10:13	1
Y Carrier	85.6		40 - 110					07/28/17 09:32	08/09/17 10:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.582		0.256	0.260	5.00	0.367	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-4
Date Collected: 07/18/17 15:35
Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-5
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	0.262		0.0900	0.0930	1.00	0.0607	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.521		0.246	0.250	1.00	0.358	pCi/L	07/28/17 09:32	08/09/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					07/28/17 09:32	08/09/17 10:13	1
Y Carrier	85.2		40 - 110					07/28/17 09:32	08/09/17 10:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.783		0.262	0.267	5.00	0.358	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: DUP-1

Date Collected: 07/18/17 00:00

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-6

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	0.202		0.0785	0.0806	1.00	0.0675	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.449		0.235	0.239	1.00	0.348	pCi/L	07/28/17 09:32	08/09/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					07/28/17 09:32	08/09/17 10:13	1
Y Carrier	85.6		40 - 110					07/28/17 09:32	08/09/17 10:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.651		0.248	0.252	5.00	0.348	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-5
Date Collected: 07/19/17 10:40
Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-7
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	0.420		0.117	0.123	1.00	0.0998	pCi/L	07/28/17 07:54	08/21/17 08:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					07/28/17 07:54	08/21/17 08:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.687		0.243	0.251	1.00	0.328	pCi/L	07/28/17 09:32	08/09/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					07/28/17 09:32	08/09/17 10:13	1
Y Carrier	91.2		40 - 110					07/28/17 09:32	08/09/17 10:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.11		0.269	0.279	5.00	0.328	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-7
Date Collected: 07/19/17 12:00
Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-8
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	0.299		0.104	0.108	1.00	0.0954	pCi/L	07/28/17 07:54	08/21/17 08:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/28/17 07:54	08/21/17 08:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.225	U	0.227	0.228	1.00	0.368	pCi/L	07/28/17 09:32	08/09/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/28/17 09:32	08/09/17 10:14	1
Y Carrier	86.7		40 - 110					07/28/17 09:32	08/09/17 10:14	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.524		0.250	0.252	5.00	0.368	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-1
Date Collected: 07/19/17 14:10
Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-9
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	0.224		0.0900	0.0922	1.00	0.0865	pCi/L	07/28/17 07:54	08/21/17 08:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					07/28/17 07:54	08/21/17 08:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.300	U	0.215	0.217	1.00	0.336	pCi/L	07/28/17 09:32	08/09/17 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					07/28/17 09:32	08/09/17 10:15	1
Y Carrier	87.1		40 - 110					07/28/17 09:32	08/09/17 10:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.523		0.233	0.236	5.00	0.336	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-2

Date Collected: 07/19/17 15:30

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-10

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	0.269		0.0953	0.0983	1.00	0.0918	pCi/L	07/28/17 07:54	08/21/17 08:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					07/28/17 07:54	08/21/17 08:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.499		0.231	0.236	1.00	0.338	pCi/L	07/28/17 09:32	08/09/17 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					07/28/17 09:32	08/09/17 10:15	1
Y Carrier	93.1		40 - 110					07/28/17 09:32	08/09/17 10:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.768		0.250	0.255	5.00	0.338	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140712-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: FERB-1

Date Collected: 07/19/17 10:45

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-11

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	0.0690	U	0.0599	0.0603	1.00	0.0877	pCi/L	07/28/17 07:54	08/21/17 08:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					07/28/17 07:54	08/21/17 08:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0474	U	0.238	0.238	1.00	0.431	pCi/L	07/28/17 09:32	08/09/17 11:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					07/28/17 09:32	08/09/17 11:44	1
Y Carrier	92.3		40 - 110					07/28/17 09:32	08/09/17 11:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0216	U	0.245	0.246	5.00	0.431	pCi/L		08/22/17 15:38	1

Definitions/Glossary

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-140712-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-1A

Date Collected: 07/17/17 16:45

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:12	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWA-2A

Date Collected: 07/18/17 10:30

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:13	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWA-3A

Date Collected: 07/18/17 12:15

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:13	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWA-3B

Date Collected: 07/18/17 13:35

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:13	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWA-4

Date Collected: 07/18/17 15:35

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:13	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: DUP-1

Date Collected: 07/18/17 00:00

Date Received: 07/20/17 08:49

Lab Sample ID: 400-140712-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:13	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWA-5

Date Collected: 07/19/17 10:40

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323222	08/21/17 08:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321460	08/09/17 10:13	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWA-7

Date Collected: 07/19/17 12:00

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323206	08/21/17 08:17	KLS	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321489	08/09/17 10:14	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-1

Date Collected: 07/19/17 14:10

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323206	08/21/17 08:18	KLS	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321489	08/09/17 10:15	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWC-2

Date Collected: 07/19/17 15:30

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323206	08/21/17 08:18	KLS	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321489	08/09/17 10:15	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: FERB-1

Date Collected: 07/19/17 10:45

Date Received: 07/21/17 08:42

Lab Sample ID: 400-140712-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319584	07/28/17 07:54	LDE	TAL SL
Total/NA	Analysis	9315		1	323206	08/21/17 08:18	KLS	TAL SL
Total/NA	Prep	PrecSep_0			319680	07/28/17 09:32	LDE	TAL SL
Total/NA	Analysis	9320		1	321489	08/09/17 11:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	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: 400-140712-2
SDG: Plant McIntosh Landfill 3

Rad

Prep Batch: 319584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total/NA	Water	PrecSep-21	
400-140712-2	GWA-2A	Total/NA	Water	PrecSep-21	
400-140712-3	GWA-3A	Total/NA	Water	PrecSep-21	
400-140712-4	GWA-3B	Total/NA	Water	PrecSep-21	
400-140712-5	GWA-4	Total/NA	Water	PrecSep-21	
400-140712-6	DUP-1	Total/NA	Water	PrecSep-21	
400-140712-7	GWA-5	Total/NA	Water	PrecSep-21	
400-140712-8	GWA-7	Total/NA	Water	PrecSep-21	
400-140712-9	GWC-1	Total/NA	Water	PrecSep-21	
400-140712-10	GWC-2	Total/NA	Water	PrecSep-21	
400-140712-11	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-319584/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-319584/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-140712-8 DU	GWA-7	Total/NA	Water	PrecSep-21	

Prep Batch: 319680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140712-1	GWA-1A	Total/NA	Water	PrecSep_0	
400-140712-2	GWA-2A	Total/NA	Water	PrecSep_0	
400-140712-3	GWA-3A	Total/NA	Water	PrecSep_0	
400-140712-4	GWA-3B	Total/NA	Water	PrecSep_0	
400-140712-5	GWA-4	Total/NA	Water	PrecSep_0	
400-140712-6	DUP-1	Total/NA	Water	PrecSep_0	
400-140712-7	GWA-5	Total/NA	Water	PrecSep_0	
400-140712-8	GWA-7	Total/NA	Water	PrecSep_0	
400-140712-9	GWC-1	Total/NA	Water	PrecSep_0	
400-140712-10	GWC-2	Total/NA	Water	PrecSep_0	
400-140712-11	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-319680/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-319680/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-140712-8 DU	GWA-7	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-319584/1-A
Matrix: Water
Analysis Batch: 323215

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319584

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02104	U	0.0444	0.0444	1.00	0.0812	pCi/L	07/28/17 07:54	08/21/17 08:09	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					07/28/17 07:54	08/21/17 08:09	1

Lab Sample ID: LCS 160-319584/2-A
Matrix: Water
Analysis Batch: 323215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319584

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.946		1.03	1.00	0.0884	pCi/L	88	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.5		40 - 110						

Lab Sample ID: 400-140712-8 DU
Matrix: Water
Analysis Batch: 323206

Client Sample ID: GWA-7
Prep Type: Total/NA
Prep Batch: 319584

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.299		0.3109		0.113	1.00	0.0969	pCi/L	0.05	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	87.0		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-319680/1-A
Matrix: Water
Analysis Batch: 321460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319680

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.6641		0.235	0.243	1.00	0.312	pCi/L	07/28/17 09:32	08/09/17 10:11	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					07/28/17 09:32	08/09/17 10:11	1
Y Carrier	84.5		40 - 110					07/28/17 09:32	08/09/17 10:11	1

QC Sample Results

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

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

Lab Sample ID: LCS 160-319680/2-A
Matrix: Water
Analysis Batch: 321460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319680

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.1	15.53		1.66	1.00	0.356	pCi/L	119	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.5		40 - 110
Y Carrier	81.1		40 - 110

Lab Sample ID: 400-140712-8 DU
Matrix: Water
Analysis Batch: 321489

Client Sample ID: GWA-7
Prep Type: Total/NA
Prep Batch: 319680

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.225	U	0.3428	U	0.262	1.00	0.410	pCi/L	0.24	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	87.0		40 - 110
Y Carrier	87.1		40 - 110

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

Lab Sample ID: 400-140712-8 DU
Matrix: Water
Analysis Batch: 323540

Client Sample ID: GWA-7
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	0.524		0.6537		0.285	5.00	0.410	pCi/L	0.24	

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 #3 Site: CCR + State Permit		Lab PII: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Sampler: T. Payne Jof Phone: Carrier Tracking No(s): COC No: Page: 1 of 1 Job #:																																											
Analysis Requested																																													
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:	Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No) TDS - SM 2540C : Cl, F, SO4 - EPA 300 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 Metals State Permit EPA (6020) Cu, Ni, Sb, 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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	Total Number of Containers Special Instructions/Note: 400-140712 Chain of Custody																																										
<table border="1"> <thead> <tr> <th>Sample ID</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (Water, Sewer, Stormwater, Oil, Fuel, Acid)</th> <th>Preservation Code</th> </tr> </thead> <tbody> <tr> <td>GWA-1A</td> <td>7/17/17</td> <td>1645</td> <td>G</td> <td>GW</td> <td></td> </tr> <tr> <td>GWA-2A</td> <td>7/18/17</td> <td>1030</td> <td>G</td> <td>GW</td> <td></td> </tr> <tr> <td>GWA-3A</td> <td>7/18/17</td> <td>1215</td> <td>G</td> <td>GW</td> <td></td> </tr> <tr> <td>GWA-3B</td> <td>7/18/17</td> <td>1335</td> <td>G</td> <td>GW</td> <td></td> </tr> <tr> <td>GWA-4</td> <td>7/18/17</td> <td>1535</td> <td>G</td> <td>GW</td> <td></td> </tr> <tr> <td>DUP-1</td> <td>7/18/17</td> <td>-</td> <td>G</td> <td>GW</td> <td></td> </tr> </tbody> </table>	Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewer, Stormwater, Oil, Fuel, Acid)	Preservation Code	GWA-1A	7/17/17	1645	G	GW		GWA-2A	7/18/17	1030	G	GW		GWA-3A	7/18/17	1215	G	GW		GWA-3B	7/18/17	1335	G	GW		GWA-4	7/18/17	1535	G	GW		DUP-1	7/18/17	-	G	GW		Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant 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 _____ Month	Special Instructions/QC Requirements: Method of Shipment:
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewer, Stormwater, Oil, Fuel, Acid)	Preservation Code																																								
GWA-1A	7/17/17	1645	G	GW																																									
GWA-2A	7/18/17	1030	G	GW																																									
GWA-3A	7/18/17	1215	G	GW																																									
GWA-3B	7/18/17	1335	G	GW																																									
GWA-4	7/18/17	1535	G	GW																																									
DUP-1	7/18/17	-	G	GW																																									
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: Relinquished by:	Date: 7/19/17 0830 Date: 7/19/17 0830 Date: 7/20/17 0840 Date: 7/20/17 0840	Company: [Signature] Company: [Signature] Company: [Signature]	Date/Time: 7-19-17 830 Date/Time: 7-20-17 0840 Date/Time: 7-20-17 0840 Date/Time: 7-20-17 0840																																										
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: 3904 ERY NH 1.0C IRT NA 0-5/6-8 1-2/1.5		Cooler Temperature(s) °C and Other Remarks:																																											



Chain of Custody Record

resamerica rensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2871

Client Information
 Sampler: T. Payne Jr.
 Phone: _____
 Lab PM: Whitmire, Cheyenne R
 E-Mail: cheyenne.whitmire@testamericainc.com

Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: tmjpetty@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: CCR + State Permit

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sludge, Organic, etc.)	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) Cu, Ni, Sp, Ag, V, Zn		Total Number of containers	Special Instructions/Note:
						I	D	X	D	X	X	X	X		
GWA-5	7/19/17	1040	G	GW		X	D	X	D	X	X	X	3		
GWA-7	7/19/17	1200	G	GW		X	D	X	D	X	X	X	4	extra volume for radium analysis	
GWC-1	7/19/17	1410	G	GW		X	D	X	D	X	X	X	3		
GWC-2	7/19/17	1530	G	GW		X	D	X	D	X	X	X	3		
FERB-1	7/19/17	1045	G	GW		X	D	X	D	X	X	X	3		

Analysis Requested

Carrier Tracking No(s): _____

COB No: _____

Page: 1 of 1

Job #: _____

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 - EDTA
 Other: _____

M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)

400-140712 COC

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify) _____

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *[Signature]* Date/Time: _____

Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____

Custody Seals Intact: Yes 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/QC Requirements: _____

Method of Shipment: _____

Received by: *[Signature]* Date/Time: 7-20-17 748 Company: _____

Received by: _____ Date/Time: _____ Company: _____

Received by: _____ Date/Time: _____ Company: _____

Cooling Temperature(s) °C and Other Remarks: 0.02 IR7 NH 0.3/0.6 0.2/0.5

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140712-2
SDG Number: Plant McIntosh Landfill 3

Login Number: 140712

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9°C, 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: 400-140712-2
SDG: Plant McIntosh Landfill 3

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.

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-140712-2
SDG: Plant McIntosh Landfill 3

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		058448	08-31-18
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: 400-140902-1

TestAmerica Sample Delivery Group: Landfill 3

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/11/2017 2:21:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through
TotalAccess

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	6
Sample Summary	7
Client Sample Results	8
Definitions	14
Chronicle	15
QC Association	17
QC Sample Results	19
Chain of Custody	24
Receipt Checklists	25
Certification Summary	26

Case Narrative

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Job ID: 400-140902-1

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-140902-1**

General Chemistry

Method(s) SM 2540C: TDS analysis of the following sample was started within the method prescribed hold time. A conductivity screen of the sample indicated a significant TDS presence requiring reduced sample volume for the analysis. However, the final residue weight at the end of overnight drying process was negligible indicating that a problem had occurred with the crucible, filtration, or tare weight. The lab was not able to determine the source of this discrepancy and had to therefore restart the test outside of the method hold time. GWC-5 (400-140902-4).

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-4A

Lab Sample ID: 400-140902-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.83	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.028		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.29		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0012	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00067	J	0.0013	0.00024	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-3

Lab Sample ID: 400-140902-2

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
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0036		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00050	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0098		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00046	J	0.0013	0.00024	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-4B

Lab Sample ID: 400-140902-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32		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
Arsenic	0.00080	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.17	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Vanadium	0.0019	J	0.0025	0.0014	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-5

Lab Sample ID: 400-140902-4

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	0.62		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	25		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-5 (Continued)

Lab Sample ID: 400-140902-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.47		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00049	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Nickel	8.6		2.5	1.8	ug/L	5		6020	Total Recoverable
Calcium	8.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0091		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0042	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.016		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.012		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00066		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Vanadium	0.014		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.016	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	210	H	25	17	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-140902-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.84	J	1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00062	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.045		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00062	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0088		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Vanadium	0.0021	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-140902-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00055	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Vanadium	0.0014	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: 400-140902-1
SDG: Landfill 3

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: 400-140902-1
SDG: Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140902-1	GWC-4A	Water	07/20/17 10:10	07/22/17 08:16
400-140902-2	GWC-3	Water	07/20/17 10:20	07/22/17 08:16
400-140902-3	GWC-4B	Water	07/20/17 11:35	07/22/17 08:16
400-140902-4	GWC-5	Water	07/20/17 11:45	07/22/17 08:16
400-140902-5	GWC-6	Water	07/20/17 12:20	07/22/17 08:16
400-140902-6	FB-1	Water	07/20/17 14:00	07/22/17 08:16

- 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: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-4A

Lab Sample ID: 400-140902-1

Date Collected: 07/20/17 10:10

Matrix: Water

Date Received: 07/22/17 08:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			07/26/17 07:43	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/17 07:43	1
Sulfate	0.83	J	1.0	0.70	mg/L			07/26/17 07:43	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		07/28/17 11:48	08/05/17 20:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:23	5
Barium	0.028		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:23	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:23	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:23	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:23	5
Calcium	0.29		0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:23	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:23	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:23	5
Molybdenum	0.0012	J	0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:23	5
Selenium	0.00067	J	0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:23	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:23	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:23	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/28/17 15:04	08/03/17 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			07/25/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-3
Date Collected: 07/20/17 10:20
Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-2
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			07/26/17 08:28	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/17 08:28	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/17 08:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 11:48	08/05/17 20:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:28	5
Barium	0.044		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:28	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:28	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:28	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:28	5
Calcium	2.1		0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:28	5
Chromium	0.0036		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:28	5
Cobalt	0.00050	J	0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:28	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:28	5
Lithium	0.0098		0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:28	5
Selenium	0.00046	J	0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:28	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:28	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:28	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		07/28/17 15:04	08/03/17 12:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			07/25/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-4B

Lab Sample ID: 400-140902-3

Date Collected: 07/20/17 11:35

Matrix: Water

Date Received: 07/22/17 08:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32		1.0	0.89	mg/L			07/26/17 09:37	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/17 09:37	1
Sulfate	1.5		1.0	0.70	mg/L			07/26/17 09:37	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		07/28/17 11:48	08/05/17 20:33	5
Arsenic	0.00080	J	0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:33	5
Barium	0.040		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:33	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:33	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:33	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:33	5
Calcium	0.17	J	0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:33	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:33	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:33	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:33	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:33	5
Vanadium	0.0019	J	0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:33	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:33	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/28/17 15:04	08/03/17 12:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	60		5.0	3.4	mg/L			07/27/17 16:40	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-5
Date Collected: 07/20/17 11:45
Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-4
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			07/26/17 10:00	1
Fluoride	0.62		0.20	0.082	mg/L			07/26/17 10:00	1
Sulfate	25		1.0	0.70	mg/L			07/26/17 10:00	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		07/28/17 11:48	08/05/17 20:38	5
Arsenic	0.0014		0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:38	5
Barium	0.47		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:38	5
Beryllium	0.00049	J	0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:38	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:38	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:38	5
Nickel	8.6		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:38	5
Calcium	8.1		0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:38	5
Cobalt	0.0091		0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:38	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:38	5
Lithium	0.0042	J	0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:38	5
Molybdenum	0.016		0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:38	5
Selenium	0.012		0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:38	5
Thallium	0.00066		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:38	5
Vanadium	0.014		0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:38	5
Zinc	0.016	J	0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/28/17 15:04	08/03/17 12:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210	H	25	17	mg/L			07/29/17 12:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-6
Date Collected: 07/20/17 12:20
Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.2		1.0	0.89	mg/L			07/26/17 10:23	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/17 10:23	1
Sulfate	0.84	J	1.0	0.70	mg/L			07/26/17 10:23	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		07/28/17 11:48	08/05/17 20:42	5
Arsenic	0.00062	J	0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:42	5
Barium	0.045		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:42	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:42	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:42	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:42	5
Calcium	1.5		0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:42	5
Cobalt	0.00062	J	0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:42	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:42	5
Lithium	0.0088		0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:42	5
Vanadium	0.0021	J	0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:42	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:42	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		07/28/17 15:04	08/03/17 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			07/27/17 16:40	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-1
 SDG: Landfill 3

Client Sample ID: FB-1
Date Collected: 07/20/17 14:00
Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-6
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			07/26/17 10:45	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/17 10:45	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/17 10:45	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		07/28/17 11:48	08/05/17 20:47	5
Arsenic	0.00055	J	0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:47	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:47	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:47	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:47	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:47	5
Calcium	<0.13		0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:47	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:47	5
Vanadium	0.0014	J	0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:47	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/28/17 15:04	08/03/17 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			07/27/17 16:40	1

Definitions/Glossary

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

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.

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: 400-140902-1
SDG: Landfill 3

Client Sample ID: GWC-4A

Date Collected: 07/20/17 10:10

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361746	07/26/17 07:43	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362097	07/28/17 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363171	08/05/17 20:23	DRE	TAL PEN
Total/NA	Prep	7470A			362071	07/28/17 15:04	JAP	TAL PEN
Total/NA	Analysis	7470A		1	362984	08/03/17 12:33	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	361567	07/25/17 15:24	TET	TAL PEN

Client Sample ID: GWC-3

Date Collected: 07/20/17 10:20

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361746	07/26/17 08:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362097	07/28/17 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363171	08/05/17 20:28	DRE	TAL PEN
Total/NA	Prep	7470A			362071	07/28/17 15:04	JAP	TAL PEN
Total/NA	Analysis	7470A		1	362984	08/03/17 12:34	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	361567	07/25/17 15:24	TET	TAL PEN

Client Sample ID: GWC-4B

Date Collected: 07/20/17 11:35

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361746	07/26/17 09:37	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362097	07/28/17 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363171	08/05/17 20:33	DRE	TAL PEN
Total/NA	Prep	7470A			362071	07/28/17 15:04	JAP	TAL PEN
Total/NA	Analysis	7470A		1	362984	08/03/17 12:36	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	361990	07/27/17 16:40	TET	TAL PEN

Client Sample ID: GWC-5

Date Collected: 07/20/17 11:45

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361746	07/26/17 10:00	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362097	07/28/17 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363171	08/05/17 20:38	DRE	TAL PEN
Total/NA	Prep	7470A			362071	07/28/17 15:04	JAP	TAL PEN
Total/NA	Analysis	7470A		1	362984	08/03/17 12:38	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	362244	07/29/17 12:24	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-140902-1
 SDG: Landfill 3

Client Sample ID: GWC-6

Date Collected: 07/20/17 12:20

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361746	07/26/17 10:23	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362097	07/28/17 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363171	08/05/17 20:42	DRE	TAL PEN
Total/NA	Prep	7470A			362071	07/28/17 15:04	JAP	TAL PEN
Total/NA	Analysis	7470A		1	362984	08/03/17 12:56	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	361990	07/27/17 16:40	TET	TAL PEN

Client Sample ID: FB-1

Date Collected: 07/20/17 14:00

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361746	07/26/17 10:45	TAJ	TAL PEN
Total Recoverable	Prep	3005A			362097	07/28/17 11:48	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	363171	08/05/17 20:47	DRE	TAL PEN
Total/NA	Prep	7470A			362071	07/28/17 15:04	JAP	TAL PEN
Total/NA	Analysis	7470A		1	362984	08/03/17 12:58	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	361990	07/27/17 16:40	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: 400-140902-1
SDG: Landfill 3

HPLC/IC

Analysis Batch: 361746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total/NA	Water	300.0	
400-140902-2	GWC-3	Total/NA	Water	300.0	
400-140902-3	GWC-4B	Total/NA	Water	300.0	
400-140902-4	GWC-5	Total/NA	Water	300.0	
400-140902-5	GWC-6	Total/NA	Water	300.0	
400-140902-6	FB-1	Total/NA	Water	300.0	
MB 400-361746/39	Method Blank	Total/NA	Water	300.0	
LCS 400-361746/40	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-361746/41	Lab Control Sample Dup	Total/NA	Water	300.0	
400-140890-A-15 MS	Matrix Spike	Total/NA	Water	300.0	
400-140890-A-15 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 362071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total/NA	Water	7470A	
400-140902-2	GWC-3	Total/NA	Water	7470A	
400-140902-3	GWC-4B	Total/NA	Water	7470A	
400-140902-4	GWC-5	Total/NA	Water	7470A	
400-140902-5	GWC-6	Total/NA	Water	7470A	
400-140902-6	FB-1	Total/NA	Water	7470A	
MB 400-362071/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-362071/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-141084-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-141084-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 362097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total Recoverable	Water	3005A	
400-140902-2	GWC-3	Total Recoverable	Water	3005A	
400-140902-3	GWC-4B	Total Recoverable	Water	3005A	
400-140902-4	GWC-5	Total Recoverable	Water	3005A	
400-140902-5	GWC-6	Total Recoverable	Water	3005A	
400-140902-6	FB-1	Total Recoverable	Water	3005A	
MB 400-362097/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-362097/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-140905-A-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-140905-A-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 362984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total/NA	Water	7470A	362071
400-140902-2	GWC-3	Total/NA	Water	7470A	362071
400-140902-3	GWC-4B	Total/NA	Water	7470A	362071
400-140902-4	GWC-5	Total/NA	Water	7470A	362071
400-140902-5	GWC-6	Total/NA	Water	7470A	362071
400-140902-6	FB-1	Total/NA	Water	7470A	362071
MB 400-362071/14-A	Method Blank	Total/NA	Water	7470A	362071
LCS 400-362071/15-A	Lab Control Sample	Total/NA	Water	7470A	362071

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Metals (Continued)

Analysis Batch: 362984 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141084-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	362071
400-141084-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	362071

Analysis Batch: 363171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total Recoverable	Water	6020	362097
400-140902-2	GWC-3	Total Recoverable	Water	6020	362097
400-140902-3	GWC-4B	Total Recoverable	Water	6020	362097
400-140902-4	GWC-5	Total Recoverable	Water	6020	362097
400-140902-5	GWC-6	Total Recoverable	Water	6020	362097
400-140902-6	FB-1	Total Recoverable	Water	6020	362097
MB 400-362097/1-A ^5	Method Blank	Total Recoverable	Water	6020	362097
LCS 400-362097/2-A	Lab Control Sample	Total Recoverable	Water	6020	362097
400-140905-A-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	362097
400-140905-A-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	362097

General Chemistry

Analysis Batch: 361567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total/NA	Water	SM 2540C	
400-140902-2	GWC-3	Total/NA	Water	SM 2540C	
MB 400-361567/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-361567/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-140902-1 DU	GWC-4A	Total/NA	Water	SM 2540C	
400-140902-2 DU	GWC-3	Total/NA	Water	SM 2540C	

Analysis Batch: 361990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-3	GWC-4B	Total/NA	Water	SM 2540C	
400-140902-5	GWC-6	Total/NA	Water	SM 2540C	
400-140902-6	FB-1	Total/NA	Water	SM 2540C	
MB 400-361990/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-361990/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-140902-3 DU	GWC-4B	Total/NA	Water	SM 2540C	

Analysis Batch: 362244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-4	GWC-5	Total/NA	Water	SM 2540C	
MB 400-362244/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-362244/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-141147-I-3 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-361746/39
Matrix: Water
Analysis Batch: 361746

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/26/17 01:15	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/17 01:15	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/17 01:15	1

Lab Sample ID: LCS 400-361746/40
Matrix: Water
Analysis Batch: 361746

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	9.73		mg/L		97	90 - 110
Fluoride	10.0	9.76		mg/L		98	90 - 110
Sulfate	10.0	9.83		mg/L		98	90 - 110

Lab Sample ID: LCSD 400-361746/41
Matrix: Water
Analysis Batch: 361746

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	9.74		mg/L		97	90 - 110	0	15
Fluoride	10.0	9.90		mg/L		99	90 - 110	1	15
Sulfate	10.0	9.80		mg/L		98	90 - 110	0	15

Lab Sample ID: 400-140890-A-15 MS
Matrix: Water
Analysis Batch: 361746

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	42000	E	1000	41600	E 4	mg/L		-49	80 - 120
Fluoride	<8.2		1000	1020		mg/L		102	80 - 120
Sulfate	6400	E	1000	7350	E 4	mg/L		99	80 - 120

Lab Sample ID: 400-140890-A-15 MSD
Matrix: Water
Analysis Batch: 361746

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	42000	E	1000	41500	E 4	mg/L		-52	80 - 120	0	20
Fluoride	<8.2		1000	1030		mg/L		103	80 - 120	1	20
Sulfate	6400	E	1000	7360	E 4	mg/L		100	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-362097/1-A ^5
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 362097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/28/17 11:48	08/05/17 20:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/28/17 11:48	08/05/17 20:09	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

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

Lab Sample ID: MB 400-362097/1-A ^5
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 362097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/28/17 11:48	08/05/17 20:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:09	5
Boron	<0.021		0.050	0.021	mg/L		07/28/17 11:48	08/05/17 20:09	5
Copper	<0.0021		0.0025	0.0021	mg/L		07/28/17 11:48	08/05/17 20:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/28/17 11:48	08/05/17 20:09	5
Nickel	<1.8		2.5	1.8	ug/L		07/28/17 11:48	08/05/17 20:09	5
Calcium	<0.13		0.25	0.13	mg/L		07/28/17 11:48	08/05/17 20:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/28/17 11:48	08/05/17 20:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/28/17 11:48	08/05/17 20:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/28/17 11:48	08/05/17 20:09	5
Silver	<0.11		1.3	0.11	ug/L		07/28/17 11:48	08/05/17 20:09	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/28/17 11:48	08/05/17 20:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/28/17 11:48	08/05/17 20:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/28/17 11:48	08/05/17 20:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/28/17 11:48	08/05/17 20:09	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/28/17 11:48	08/05/17 20:09	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/28/17 11:48	08/05/17 20:09	5

Lab Sample ID: LCS 400-362097/2-A
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 362097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0533		mg/L		107	80 - 120
Arsenic	0.0500	0.0519		mg/L		104	80 - 120
Barium	0.0500	0.0512		mg/L		102	80 - 120
Beryllium	0.0500	0.0496		mg/L		99	80 - 120
Boron	0.100	0.104		mg/L		104	80 - 120
Copper	0.0500	0.0475		mg/L		95	80 - 120
Cadmium	0.0500	0.0526		mg/L		105	80 - 120
Nickel	50.0	53.9		ug/L		108	80 - 120
Calcium	5.00	4.67		mg/L		93	80 - 120
Chromium	0.0500	0.0470		mg/L		94	80 - 120
Cobalt	0.0500	0.0521		mg/L		104	80 - 120
Lead	0.0500	0.0524		mg/L		105	80 - 120
Silver	50.0	52.5		ug/L		105	80 - 120
Lithium	0.0500	0.0557		mg/L		111	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120
Selenium	0.0500	0.0530		mg/L		106	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Vanadium	0.0500	0.0469		mg/L		94	80 - 120
Zinc	0.0500	0.0563		mg/L		113	80 - 120

Lab Sample ID: 400-140905-A-1-B MS ^5
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 362097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0569		mg/L		114	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

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

Lab Sample ID: 400-140905-A-1-B MS ^5
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 362097

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Arsenic	0.00053	J	0.0500	0.0534		mg/L		106		75 - 125
Barium	0.011		0.0500	0.0620		mg/L		102		75 - 125
Beryllium	<0.00034		0.0500	0.0501		mg/L		100		75 - 125
Boron	<0.021		0.100	0.118		mg/L		118		75 - 125
Copper	<0.0021		0.0500	0.0479		mg/L		96		75 - 125
Cadmium	<0.00034		0.0500	0.0528		mg/L		106		75 - 125
Nickel	<1.8		50.0	55.7		ug/L		111		75 - 125
Calcium	0.65		5.00	5.38		mg/L		95		75 - 125
Chromium	0.0017	J	0.0500	0.0497		mg/L		96		75 - 125
Cobalt	0.00051	J	0.0500	0.0489		mg/L		97		75 - 125
Lead	<0.00035		0.0500	0.0472		mg/L		94		75 - 125
Silver	<0.11		50.0	54.5		ug/L		109		75 - 125
Lithium	<0.0032		0.0500	0.0540		mg/L		108		75 - 125
Molybdenum	<0.00085		0.100	0.110		mg/L		110		75 - 125
Selenium	<0.00024		0.0500	0.0567		mg/L		113		75 - 125
Thallium	<0.000085		0.0100	0.0102		mg/L		102		75 - 125
Vanadium	0.0015	J	0.0500	0.0479		mg/L		93		75 - 125
Zinc	<0.0065		0.0500	0.0568		mg/L		114		75 - 125

Lab Sample ID: 400-140905-A-1-C MSD ^5
Matrix: Water
Analysis Batch: 363171

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 362097

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0544		mg/L		109		75 - 125	4	20
Arsenic	0.00053	J	0.0500	0.0531		mg/L		105		75 - 125	1	20
Barium	0.011		0.0500	0.0628		mg/L		104		75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0491		mg/L		98		75 - 125	2	20
Boron	<0.021		0.100	0.114		mg/L		114		75 - 125	4	20
Copper	<0.0021		0.0500	0.0482		mg/L		96		75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0520		mg/L		104		75 - 125	1	20
Nickel	<1.8		50.0	55.3		ug/L		111		75 - 125	1	20
Calcium	0.65		5.00	5.37		mg/L		94		75 - 125	0	20
Chromium	0.0017	J	0.0500	0.0491		mg/L		95		75 - 125	1	20
Cobalt	0.00051	J	0.0500	0.0493		mg/L		98		75 - 125	1	20
Lead	<0.00035		0.0500	0.0479		mg/L		96		75 - 125	1	20
Silver	<0.11		50.0	54.5		ug/L		109		75 - 125	0	20
Lithium	<0.0032		0.0500	0.0539		mg/L		108		75 - 125	0	20
Molybdenum	<0.00085		0.100	0.110		mg/L		110		75 - 125	1	20
Selenium	<0.00024		0.0500	0.0541		mg/L		108		75 - 125	5	20
Thallium	<0.000085		0.0100	0.0101		mg/L		101		75 - 125	1	20
Vanadium	0.0015	J	0.0500	0.0475		mg/L		92		75 - 125	1	20
Zinc	<0.0065		0.0500	0.0566		mg/L		113		75 - 125	0	20

QC Sample Results

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

TestAmerica Job ID: 400-140902-1
SDG: Landfill 3

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-362071/14-A
Matrix: Water
Analysis Batch: 362984

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 362071

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/28/17 09:21	08/03/17 12:22	1

Lab Sample ID: LCS 400-362071/15-A
Matrix: Water
Analysis Batch: 362984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 362071

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: 400-141084-B-1-B MS
Matrix: Water
Analysis Batch: 362984

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 362071

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00166		mg/L		82	80 - 120

Lab Sample ID: 400-141084-B-1-C MSD
Matrix: Water
Analysis Batch: 362984

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 362071

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00165		mg/L		82	80 - 120	0	20

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

Lab Sample ID: MB 400-361567/1
Matrix: Water
Analysis Batch: 361567

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			07/25/17 15:24	1

Lab Sample ID: LCS 400-361567/2
Matrix: Water
Analysis Batch: 361567

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	282		mg/L		96	78 - 122

Lab Sample ID: 400-140902-1 DU
Matrix: Water
Analysis Batch: 361567

Client Sample ID: GWC-4A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	16		16.0		mg/L		0	5

QC Sample Results

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

TestAmerica Job ID: 400-140902-1
 SDG: Landfill 3

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

Lab Sample ID: 400-140902-2 DU
Matrix: Water
Analysis Batch: 361567

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	64		64.0		mg/L		0	5

Lab Sample ID: MB 400-361990/1
Matrix: Water
Analysis Batch: 361990

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			07/27/17 16:40	1

Lab Sample ID: LCS 400-361990/2
Matrix: Water
Analysis Batch: 361990

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	278		mg/L		95	78 - 122

Lab Sample ID: 400-140902-3 DU
Matrix: Water
Analysis Batch: 361990

Client Sample ID: GWC-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	60		60.0		mg/L		0	5

Lab Sample ID: MB 400-362244/1
Matrix: Water
Analysis Batch: 362244

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			07/29/17 12:24	1

Lab Sample ID: LCS 400-362244/2
Matrix: Water
Analysis Batch: 362244

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	282		mg/L		96	78 - 122

Lab Sample ID: 400-141147-I-3 DU
Matrix: Water
Analysis Batch: 362244

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	660		658		mg/L		0	5

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sampler: T. Payne *TJP* Lab PM: Whitmire, Cheyenne R
 Phone: Client Contact: Lauren Petty E-Mail: cheyenne.whitmire@testamericainc.co
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: Impetty@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: CCR + State Permit

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Spent, Condensate, BT+Base, A=As)	Preservation Code:	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - 5M-846 9315 & 9320		Metals State Permit EPA (6020) Cu, Ni, Sb, Ag, V, Zn		Total Number of Containers	Special Instructions/Note:
						Field Filtered	MS/MSD	Field Filtered	MS/MSD	Field Filtered	MS/MSD	Field Filtered	MS/MSD				
GWC-4A	7/20/17	1010	G	GW		X	X	X	X	X	X	X	X	X	X	3	
GWC-3	7/20/17	1020	G	GW		X	X	X	X	X	X	X	X	X	X	3	
GWC-4B	7/20/17	1135	G	GW		X	X	X	X	X	X	X	X	X	X	3	
GWC-5	7/20/17	1145	G	GW		X	X	X	X	X	X	X	X	X	X	3	
GWC-6	7/20/17	1220	G	GW		X	X	X	X	X	X	X	X	X	X	3	
FB-1	7/20/17	1400	G	GW		X	X	X	X	X	X	X	X	X	X	3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison 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: *[Signature]* Date/Time: *7/21/17 9:48* Company: *TA*
 Relinquished by: *[Signature]* Date/Time: *7/22/17 9:16* Company: *TA*
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Δ
 Custody Seal No.: *0-5/0.8 1-6/1-9*

Carrier Tracking No(s):
 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 - NaZOMS
 Q - Na2SO3
 R - Na2SO4
 S - H2SO4
 T - TSP
 U - Acetone
 V - MCAA
 W - ph 4-5
 Z - other (specify)



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140902-1

SDG Number: Landfill 3

Login Number: 140902

List Number: 1

Creator: Johnson, Jeremy N

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	
COC is present.	True	0.0°C IR-2
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: 400-140902-1
 SDG: Landfill 3

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-140902-2

TestAmerica Sample Delivery Group: Plant McIntosh Landfill 3

Client Project/Site: CCR - Plant McIntosh

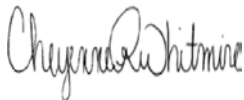
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/28/2017 11:13:44 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through
TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	12
Chronicle	13
QC Association	15
QC Sample Results	16
Chain of Custody	18
Receipt Checklists	19
Certification Summary	20

Case Narrative

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Job ID: 400-140902-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-140902-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-319704. Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. GWC-4A (400-140902-1), GWC-3 (400-140902-2), GWC-4B (400-140902-3), GWC-5 (400-140902-4), GWC-6 (400-140902-5) and FB-1 (400-140902-6)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-319695. Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. GWC-4A (400-140902-1), GWC-3 (400-140902-2), GWC-4B (400-140902-3), GWC-5 (400-140902-4), GWC-6 (400-140902-5) and FB-1 (400-140902-6)



Method Summary

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140902-1	GWC-4A	Water	07/20/17 10:10	07/22/17 08:16
400-140902-2	GWC-3	Water	07/20/17 10:20	07/22/17 08:16
400-140902-3	GWC-4B	Water	07/20/17 11:35	07/22/17 08:16
400-140902-4	GWC-5	Water	07/20/17 11:45	07/22/17 08:16
400-140902-5	GWC-6	Water	07/20/17 12:20	07/22/17 08:16
400-140902-6	FB-1	Water	07/20/17 14:00	07/22/17 08:16

- 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: 400-140902-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-4A

Date Collected: 07/20/17 10:10

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-1

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	0.216		0.120	0.121	1.00	0.146	pCi/L	07/28/17 10:45	08/21/17 06:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					07/28/17 10:45	08/21/17 06:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.615		0.258	0.264	1.00	0.357	pCi/L	07/28/17 13:13	08/18/17 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					07/28/17 13:13	08/18/17 10:20	1
Y Carrier	76.6		40 - 110					07/28/17 13:13	08/18/17 10:20	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	0.831		0.284	0.291	5.00	0.357	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-2
 SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-3
Date Collected: 07/20/17 10:20
Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-2
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	0.259		0.129	0.131	1.00	0.150	pCi/L	07/28/17 10:45	08/21/17 06:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/28/17 10:45	08/21/17 06:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.587		0.256	0.261	1.00	0.355	pCi/L	07/28/17 13:13	08/18/17 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/28/17 13:13	08/18/17 10:20	1
Y Carrier	75.9		40 - 110					07/28/17 13:13	08/18/17 10:20	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	0.846		0.286	0.292	5.00	0.355	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-4B

Lab Sample ID: 400-140902-3

Date Collected: 07/20/17 11:35

Matrix: Water

Date Received: 07/22/17 08:16

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.286		0.136	0.138	1.00	0.156	pCi/L	07/28/17 10:45	08/21/17 06:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/28/17 10:45	08/21/17 06:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.40		0.329	0.353	1.00	0.370	pCi/L	07/28/17 13:13	08/18/17 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/28/17 13:13	08/18/17 10:20	1
Y Carrier	74.4		40 - 110					07/28/17 13:13	08/18/17 10:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.69		0.356	0.379	5.00	0.370	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-5

Date Collected: 07/20/17 11:45

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-4

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	2.47		0.326	0.394	1.00	0.122	pCi/L	07/28/17 10:45	08/21/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					07/28/17 10:45	08/21/17 06:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.09		0.481	0.611	1.00	0.380	pCi/L	07/28/17 13:13	08/18/17 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					07/28/17 13:13	08/18/17 10:20	1
Y Carrier	73.3		40 - 110					07/28/17 13:13	08/18/17 10:20	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	6.56		0.581	0.727	5.00	0.380	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-6

Date Collected: 07/20/17 12:20

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-5

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	0.178		0.111	0.113	1.00	0.150	pCi/L	07/28/17 10:45	08/21/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					07/28/17 10:45	08/21/17 06:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.757		0.258	0.267	1.00	0.340	pCi/L	07/28/17 13:13	08/18/17 10:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					07/28/17 13:13	08/18/17 10:20	1
Y Carrier	87.5		40 - 110					07/28/17 13:13	08/18/17 10:20	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	0.935		0.281	0.290	5.00	0.340	pCi/L		08/22/17 15:38	1

Client Sample Results

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: FB-1
Date Collected: 07/20/17 14:00
Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-6
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	0.0133	U	0.0738	0.0738	1.00	0.146	pCi/L	07/28/17 10:45	08/21/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					07/28/17 10:45	08/21/17 06:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.242	U	0.210	0.212	1.00	0.336	pCi/L	07/28/17 13:13	08/18/17 10:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					07/28/17 13:13	08/18/17 10:21	1
Y Carrier	86.7		40 - 110					07/28/17 13:13	08/18/17 10:21	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	0.255	U	0.223	0.224	5.00	0.336	pCi/L		08/22/17 15:38	1

Definitions/Glossary

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-140902-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-4A

Date Collected: 07/20/17 10:10

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319695	07/28/17 10:45	LDE	TAL SL
Total/NA	Analysis	9315		1	323215	08/21/17 06:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319704	07/28/17 13:13	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 10:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWC-3

Date Collected: 07/20/17 10:20

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319695	07/28/17 10:45	LDE	TAL SL
Total/NA	Analysis	9315		1	323215	08/21/17 06:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319704	07/28/17 13:13	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 10:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWC-4B

Date Collected: 07/20/17 11:35

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319695	07/28/17 10:45	LDE	TAL SL
Total/NA	Analysis	9315		1	323215	08/21/17 06:03	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319704	07/28/17 13:13	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 10:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: GWC-5

Date Collected: 07/20/17 11:45

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319695	07/28/17 10:45	LDE	TAL SL
Total/NA	Analysis	9315		1	323215	08/21/17 06:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319704	07/28/17 13:13	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 10:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Client Sample ID: GWC-6

Date Collected: 07/20/17 12:20

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319695	07/28/17 10:45	LDE	TAL SL
Total/NA	Analysis	9315		1	323215	08/21/17 06:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319704	07/28/17 13:13	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 10:20	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	RTM	TAL SL

Client Sample ID: FB-1

Date Collected: 07/20/17 14:00

Date Received: 07/22/17 08:16

Lab Sample ID: 400-140902-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			319695	07/28/17 10:45	LDE	TAL SL
Total/NA	Analysis	9315		1	323215	08/21/17 06:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			319704	07/28/17 13:13	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 10:21	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	323540	08/22/17 15:38	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: 400-140902-2
 SDG: Plant McIntosh Landfill 3

Rad

Prep Batch: 319695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total/NA	Water	PrecSep-21	
400-140902-2	GWC-3	Total/NA	Water	PrecSep-21	
400-140902-3	GWC-4B	Total/NA	Water	PrecSep-21	
400-140902-4	GWC-5	Total/NA	Water	PrecSep-21	
400-140902-5	GWC-6	Total/NA	Water	PrecSep-21	
400-140902-6	FB-1	Total/NA	Water	PrecSep-21	
MB 160-319695/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-319695/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-319695/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 319704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140902-1	GWC-4A	Total/NA	Water	PrecSep_0	
400-140902-2	GWC-3	Total/NA	Water	PrecSep_0	
400-140902-3	GWC-4B	Total/NA	Water	PrecSep_0	
400-140902-4	GWC-5	Total/NA	Water	PrecSep_0	
400-140902-5	GWC-6	Total/NA	Water	PrecSep_0	
400-140902-6	FB-1	Total/NA	Water	PrecSep_0	
MB 160-319704/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-319704/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-319704/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-319695/1-A
Matrix: Water
Analysis Batch: 323221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319695

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1360		0.0965	0.0972	1.00	0.128	pCi/L	07/28/17 10:45	08/21/17 05:59	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	99.1		40 - 110	07/28/17 10:45	08/21/17 05:59	1				

Lab Sample ID: LCS 160-319695/2-A
Matrix: Water
Analysis Batch: 323221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319695

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	11.29		1.25	1.00	0.154	pCi/L	99	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed				
Ba Carrier	93.8		40 - 110	07/28/17 10:45	08/21/17 05:59	1			

Lab Sample ID: LCSD 160-319695/3-A
Matrix: Water
Analysis Batch: 323221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 319695

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	10.80		1.20	1.00	0.129	pCi/L	95	68 - 137	0.20	1
Carrier	LCSD LCSD		Limits			Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed						
Ba Carrier	100		40 - 110	07/28/17 13:13	08/18/17 10:14	1					

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-319704/1-A
Matrix: Water
Analysis Batch: 322959

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319704

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.6556		0.287	0.293	1.00	0.413	pCi/L	07/28/17 13:13	08/18/17 10:14	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	99.1		40 - 110	07/28/17 13:13	08/18/17 10:14	1				
Y Carrier	%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac		
Y Carrier	72.5		40 - 110	07/28/17 13:13	08/18/17 10:14	1				

QC Sample Results

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

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

Lab Sample ID: LCS 160-319704/2-A
Matrix: Water
Analysis Batch: 322959

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319704

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.0	17.73		1.88	1.00	0.435	pCi/L	136	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.8		40 - 110
Y Carrier	74.0		40 - 110

Lab Sample ID: LCSD 160-319704/3-A
Matrix: Water
Analysis Batch: 322959

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 319704

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.0	16.83		1.78	1.00	0.414	pCi/L	129	56 - 140	0.25	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	75.5		40 - 110

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

Lab Sample ID: 400-140712-A-8 DU
Matrix: Water
Analysis Batch: 323540

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	0.524		0.6537		0.285	5.00	0.410	pCi/L	0.24	

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sampler: T. Payne *TJP* Lab PM: Whitmire, Cheyenne R. Carrier Tracking No(s):
 Phone: Client Contact: Lauren Petty E-Mail: cheyenne.whitmire@testamericainc.co
 Company: Southern Company Preservation Codes:
 Address: 42 Inverness Center Parkway A - HCL M - Hexane
 City: Birmingham B - NaOH N - None
 State, Zip: AL, 35242 C - Zn Acetate O - AsH2O2
 Phone: 205-992-5417 D - Nitric Acid P - NaZOMS
 Email: Impetty@southernco.com E - NaHSO4 Q - Na2SO3
 Project Name: Plant McIntosh - Landfill #3 F - MeOH R - Na2SO4
 Project #: S - H2SO4 T - TSP
 SSOW#: CCR + State Permit G - Amchlor H - Ascorbic Acid U - Acetone
 I - Ice J - DI Water V - MCAA
 K - EDTA W - ph 4-5
 L - EDA Z - other (specify)
 Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Spent, Condensate, BT+Base, A=As)	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) Cu, Ni, Sb, Ag, V, Zn		Total Number of Containers	Special Instructions/Note:
						Field Filtered	MS/MSD	Metals	MS/MSD	Metals	State Permit	Metals	State Permit		
GWC-4A	7/20/17	1010	G	GW		X	X	X	X	X	X	X	3		
GWC-3	7/20/17	1020	G	GW		X	X	X	X	X	X	X	3		
GWC-4B	7/20/17	1135	G	GW		X	X	X	X	X	X	X	3		
GWC-5	7/20/17	1145	G	GW		X	X	X	X	X	X	X	3		
GWC-6	7/20/17	1220	G	GW		X	X	X	X	X	X	X	3		
FB-1	7/20/17	1400	G	GW		X	X	X	X	X	X	X	3		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Uplifted Radiological
 Deliverable Requested: I, II, III, IV, Other (specify) Return To Client Disposal By Lab Archive For Month

Empty Kit Relinquished by: Date: Time: Method of Shipment:
 Relinquished by: *[Signature]* Date/Time: 7-21-17 9:48 Company: TA
 Relinquished by: *[Signature]* Date/Time: 7/22/17 9:16 Company: TA
 Relinquished by: *[Signature]* Date/Time: 8-5/16-8 Company: 1-6/1-9
 Custody Seals Intact: Yes No No
 Custody Seal No.: *[Handwritten]*
 Cooler Temperature(s) °C and Other Remarks: *[Handwritten]*



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140902-2
SDG Number: Plant McIntosh Landfill 3

Login Number: 140902

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	
COC is present.	True	0.0°C IR-2
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: 400-140902-2
SDG: Plant McIntosh Landfill 3

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.

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-140902-2
SDG: Plant McIntosh Landfill 3

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		058448	08-31-18
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: 400-143704-1

TestAmerica SDG: McIntosh Ash Disposal Area 3

Client Project/Site: CCR - Plant McIntosh

Sampling Event: Landfill #3 Bi-Monthly

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

10/6/2017 5:12:10 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	10
Sample Summary	11
Client Sample Results	12
Definitions	31
Chronicle	32
QC Association	37
QC Sample Results	41
Chain of Custody	49
Receipt Checklists	52
Certification Summary	53

Case Narrative

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Job ID: 400-143704-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-143704-1

Metals

Method(s) 6020: The serial dilution performed for the following sample associated with batch 370289 was outside control limits:
(400-143704-C-2-B SD)

Method(s) 6020: The matrix spike (MS) recovery for preparation batch 370084 and analytical batch 370289 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-143704-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0025		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lead	0.00035	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00074	J	0.0013	0.00024	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-2A

Lab Sample ID: 400-143704-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0058	F2 F1	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00041	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3A

Lab Sample ID: 400-143704-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.053		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00039	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0026		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0034	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0015	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00098	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		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: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7

Lab Sample ID: 400-143704-4

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
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.97		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0078		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00041	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00054	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.023		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7 (FILTERED)

Lab Sample ID: 400-143704-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	6.6		1.0	0.89	mg/L	1		300.0	Dissolved
Barium, Dissolved	0.015		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	1.0		0.25	0.13	mg/L	5		6020	Dissolved
Chromium, Dissolved	0.0077		0.0025	0.0011	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.023		0.0013	0.00024	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.011		0.0050	0.0032	mg/L	5		6020	Dissolved
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B

Lab Sample ID: 400-143704-6

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	0.086	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.8		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00071	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00041	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0016		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	56		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-143704-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	4.7		1.0	0.89	mg/L	1		300.0	Dissolved
Fluoride, Dissolved	0.088	J	0.20	0.082	mg/L	1		300.0	Dissolved
Sulfate, Dissolved	8.7		1.0	0.70	mg/L	1		300.0	Dissolved
Arsenic, Dissolved	0.00061	J	0.0013	0.00046	mg/L	5		6020	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B (FILTERED) (Continued)

Lab Sample ID: 400-143704-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron, Dissolved	0.043	J	0.050	0.021	mg/L	5		6020	Dissolved
Barium, Dissolved	0.051		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	2.9		0.25	0.13	mg/L	5		6020	Dissolved
Chromium, Dissolved	0.0015	J	0.0025	0.0011	mg/L	5		6020	Dissolved
Molybdenum, Dissolved	0.0031	J	0.015	0.00085	mg/L	5		6020	Dissolved
Lead, Dissolved	0.0010	J	0.0013	0.00035	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.00034	J	0.0013	0.00024	mg/L	5		6020	Dissolved
Total Dissolved Solids	46		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-143704-10

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
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.30		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.0040		0.0013	0.00035	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-4

Lab Sample ID: 400-143704-11

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	4.5		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	0.90		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00073	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0076		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00042	J	0.0013	0.00024	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-2

Lab Sample ID: 400-143704-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.5		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.063		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.025	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0035		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00077	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0014		0.0013	0.00035	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2 (Continued)

Lab Sample ID: 400-143704-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	46		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-143704-13

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	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	15		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00076	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.070		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0021	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00073	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00086	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00056	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-143704-14

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	1.1		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	1.3		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	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00042	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0079		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-4A

Lab Sample ID: 400-143704-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.1		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	0.30		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: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A (Continued)

Lab Sample ID: 400-143704-15

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: GWC-3

Lab Sample ID: 400-143704-16

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	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0035		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00047	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00052	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0088		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00027	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	96		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-4B

Lab Sample ID: 400-143704-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	38		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	4.3		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00083	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.024	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	0.49		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00046	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00070	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-5

Lab Sample ID: 400-143704-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.71		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	19		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00070	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.48		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00068	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	8.0		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: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5 (Continued)

Lab Sample ID: 400-143704-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0093		0.0025	0.00040	mg/L	5		6020	Total
Lithium	0.0038	J	0.0050	0.0032	mg/L	5		6020	Recoverable Total
Molybdenum	0.010	J	0.015	0.00085	mg/L	5		6020	Recoverable Total
Selenium	0.0063		0.0013	0.00024	mg/L	5		6020	Recoverable Total
Thallium	0.00059		0.00050	0.000085	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	280		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-143704-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead - RA	0.0010	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable

Client Sample ID: FB-1

Lab Sample ID: 400-143704-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00087	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-1

Lab Sample ID: 400-143704-21

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
Barium	0.018		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	0.42		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00046	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00042	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

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: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-143704-1	GWA-1A	Water	09/20/17 10:50	09/23/17 09:16
400-143704-2	GWA-2A	Water	09/20/17 11:00	09/23/17 09:16
400-143704-3	GWA-3A	Water	09/20/17 13:40	09/23/17 09:16
400-143704-4	GWA-7	Water	09/20/17 16:20	09/23/17 09:16
400-143704-5	GWA-7 (FILTERED)	Water	09/20/17 16:20	09/23/17 09:16
400-143704-6	GWA-3B	Water	09/20/17 17:15	09/23/17 09:16
400-143704-7	GWA-3B (FILTERED)	Water	09/20/17 17:15	09/23/17 09:16
400-143704-10	GWC-1	Water	09/21/17 10:25	09/23/17 09:16
400-143704-11	GWA-4	Water	09/21/17 10:40	09/23/17 09:16
400-143704-12	GWC-2	Water	09/21/17 12:00	09/23/17 09:16
400-143704-13	GWA-5	Water	09/21/17 12:40	09/23/17 09:16
400-143704-14	GWC-6	Water	09/22/17 12:45	09/23/17 09:16
400-143704-15	GWC-4A	Water	09/21/17 14:30	09/23/17 09:16
400-143704-16	GWC-3	Water	09/21/17 14:40	09/23/17 09:16
400-143704-17	GWC-4B	Water	09/21/17 15:40	09/23/17 09:16
400-143704-18	GWC-5	Water	09/21/17 16:25	09/23/17 09:16
400-143704-19	FERB-1	Water	09/21/17 10:55	09/23/17 09:16
400-143704-20	FB-1	Water	09/21/17 12:15	09/23/17 09:16
400-143704-21	DUP-1	Water	09/21/17 00:00	09/23/17 09:16

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A

Date Collected: 09/20/17 10:50

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0		1.0	0.89	mg/L			09/25/17 13:33	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 13:33	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 13:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/29/17 23:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 23:07	5
Barium	0.023		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 23:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:07	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 23:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:07	5
Calcium	1.5		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 23:07	5
Chromium	0.0025		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 23:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 23:07	5
Lead	0.00035	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 23:07	5
Lithium	0.011		0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 23:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 23:07	5
Selenium	0.00074	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 23:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 23:07	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		09/27/17 10:34	09/29/17 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A

Date Collected: 09/20/17 11:00

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.89	mg/L			09/25/17 14:42	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 14:42	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 14:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/29/17 23:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 23:11	5
Barium	0.039		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 23:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:11	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 23:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:11	5
Calcium	3.2		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 23:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 23:11	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 23:11	5
Lead	0.0058	F2 F1	0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 23:11	5
Lithium	0.011		0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 23:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 23:11	5
Selenium	0.00041	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 23:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 23:11	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		09/27/17 10:34	09/29/17 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3A

Date Collected: 09/20/17 13:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.6		1.0	0.89	mg/L			09/25/17 15:05	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 15:05	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 15:05	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		09/29/17 11:37	09/29/17 23:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 23:34	5
Barium	0.053		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 23:34	5
Beryllium	0.00039	J	0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:34	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 23:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:34	5
Calcium	1.7		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 23:34	5
Chromium	0.0026		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 23:34	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 23:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 23:34	5
Lithium	0.0034	J	0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 23:34	5
Molybdenum	0.0015	J	0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 23:34	5
Selenium	0.00098	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 23:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 23:34	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		09/27/17 10:34	09/29/17 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7
Date Collected: 09/20/17 16:20
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-4
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			09/25/17 19:16	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 19:16	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 19:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/29/17 23:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 23:38	5
Barium	0.021		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 23:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:38	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 23:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:38	5
Calcium	0.97		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 23:38	5
Chromium	0.0078		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 23:38	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 23:38	5
Lead	0.00054	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 23:38	5
Lithium	0.011		0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 23:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 23:38	5
Selenium	0.023		0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 23:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 23:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7 (FILTERED)

Lab Sample ID: 400-143704-5

Date Collected: 09/20/17 16:20

Matrix: Water

Date Received: 09/23/17 09:16

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	6.6		1.0	0.89	mg/L			09/25/17 15:27	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			09/25/17 15:27	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			09/25/17 15:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		09/26/17 12:10	09/28/17 01:19	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		09/26/17 12:10	09/28/17 01:19	5
Barium, Dissolved	0.015		0.0025	0.00049	mg/L		09/26/17 12:10	09/28/17 01:19	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/26/17 12:10	09/28/17 01:19	5
Calcium, Dissolved	1.0		0.25	0.13	mg/L		09/26/17 12:10	09/28/17 01:19	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/26/17 12:10	09/28/17 01:19	5
Chromium, Dissolved	0.0077		0.0025	0.0011	mg/L		09/26/17 12:10	09/28/17 01:19	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/26/17 12:10	09/28/17 01:19	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		09/26/17 12:10	09/28/17 01:19	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		09/26/17 12:10	09/28/17 01:19	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/26/17 12:10	09/28/17 01:19	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/26/17 12:10	09/28/17 01:19	5
Selenium, Dissolved	0.023		0.0013	0.00024	mg/L		09/26/17 12:10	09/28/17 01:19	5
Lithium, Dissolved	0.011		0.0050	0.0032	mg/L		09/26/17 12:10	09/28/17 01:19	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B

Date Collected: 09/20/17 17:15

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-6

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			09/25/17 15:50	1
Fluoride	0.086	J	0.20	0.082	mg/L			09/25/17 15:50	1
Sulfate	8.8		1.0	0.70	mg/L			09/25/17 15:50	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		09/29/17 11:37	09/29/17 23:43	5
Arsenic	0.00071	J	0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 23:43	5
Barium	0.051		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 23:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:43	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 23:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:43	5
Calcium	2.7		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 23:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 23:43	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 23:43	5
Lead	0.0016		0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 23:43	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 23:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 23:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 23:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 23:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-143704-7

Date Collected: 09/20/17 17:15

Matrix: Water

Date Received: 09/23/17 09:16

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	4.7		1.0	0.89	mg/L			09/25/17 16:59	1
Fluoride, Dissolved	0.088	J	0.20	0.082	mg/L			09/25/17 16:59	1
Sulfate, Dissolved	8.7		1.0	0.70	mg/L			09/25/17 16:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	0.00061	J	0.0013	0.00046	mg/L		09/26/17 12:10	09/28/17 01:24	5
Boron, Dissolved	0.043	J	0.050	0.021	mg/L		09/26/17 12:10	09/28/17 01:24	5
Barium, Dissolved	0.051		0.0025	0.00049	mg/L		09/26/17 12:10	09/28/17 01:24	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/26/17 12:10	09/28/17 01:24	5
Calcium, Dissolved	2.9		0.25	0.13	mg/L		09/26/17 12:10	09/28/17 01:24	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/26/17 12:10	09/28/17 01:24	5
Chromium, Dissolved	0.0015	J	0.0025	0.0011	mg/L		09/26/17 12:10	09/28/17 01:24	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/26/17 12:10	09/28/17 01:24	5
Molybdenum, Dissolved	0.0031	J	0.015	0.00085	mg/L		09/26/17 12:10	09/28/17 01:24	5
Lead, Dissolved	0.0010	J	0.0013	0.00035	mg/L		09/26/17 12:10	09/28/17 01:24	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/26/17 12:10	09/28/17 01:24	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/26/17 12:10	09/28/17 01:24	5
Selenium, Dissolved	0.00034	J	0.0013	0.00024	mg/L		09/26/17 12:10	09/28/17 01:24	5
Lithium, Dissolved	<0.0032		0.0050	0.0032	mg/L		09/26/17 12:10	09/28/17 01:24	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	46		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-1
Date Collected: 09/21/17 10:25
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-10
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			09/25/17 17:21	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 17:21	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 17:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/29/17 23:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 23:47	5
Barium	0.016		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 23:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:47	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 23:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 23:47	5
Calcium	0.30		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 23:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 23:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 23:47	5
Lead	0.0040		0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 23:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 23:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 23:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 23:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 23:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-4
Date Collected: 09/21/17 10:40
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-11
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			09/25/17 17:44	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 17:44	1
Sulfate	4.5		1.0	0.70	mg/L			09/25/17 17:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:14	5
Barium	0.042		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:14	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:14	5
Calcium	0.90		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:14	5
Cobalt	0.00073	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:14	5
Lead	0.0076		0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:14	5
Selenium	0.00042	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:14	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		09/27/17 10:34	09/29/17 13:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2
Date Collected: 09/21/17 12:00
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-12
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.89	mg/L			09/25/17 18:07	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 18:07	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 18:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:19	5
Barium	0.063		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:19	5
Boron	0.025	J	0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:19	5
Calcium	2.9		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:19	5
Chromium	0.0035		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:19	5
Cobalt	0.00077	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:19	5
Lead	0.0014		0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	46		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-5
Date Collected: 09/21/17 12:40
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-13
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			09/25/17 18:30	1
Fluoride	0.13	J	0.20	0.082	mg/L			09/25/17 18:30	1
Sulfate	15		1.0	0.70	mg/L			09/25/17 18:30	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		09/29/17 11:37	09/30/17 00:23	5
Arsenic	0.00076	J	0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:23	5
Barium	0.10		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:23	5
Boron	0.070		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:23	5
Calcium	2.7		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:23	5
Chromium	0.0021	J	0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:23	5
Cobalt	0.00073	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:23	5
Lead	0.00086	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:23	5
Selenium	0.00056	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:23	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	76		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-6

Date Collected: 09/22/17 12:45

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-14

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			09/25/17 19:38	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 19:38	1
Sulfate	1.1		1.0	0.70	mg/L			09/25/17 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:28	5
Barium	0.040		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:28	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:28	5
Calcium	1.3		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:28	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:28	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:28	5
Lead	0.00042	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:28	5
Lithium	0.0079		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:28	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		09/27/17 10:34	09/29/17 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	66		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A
Date Collected: 09/21/17 14:30
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-15
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			09/25/17 20:01	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 20:01	1
Sulfate	1.1		1.0	0.70	mg/L			09/25/17 20:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:32	5
Barium	0.032		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:32	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:32	5
Calcium	0.30		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:32	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:32	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		09/27/17 10:34	09/29/17 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-3

Date Collected: 09/21/17 14:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-16

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			09/25/17 20:24	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 20:24	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 20:24	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		09/29/17 11:37	09/30/17 00:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:37	5
Barium	0.043		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:37	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:37	5
Calcium	2.3		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:37	5
Chromium	0.0035		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:37	5
Cobalt	0.00047	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:37	5
Lead	0.00052	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:37	5
Lithium	0.0088		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:37	5
Selenium	0.00027	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:37	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		09/27/17 10:34	09/29/17 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	96		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4B

Date Collected: 09/21/17 15:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-17

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38		1.0	0.89	mg/L			09/25/17 21:32	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 21:32	1
Sulfate	4.3		1.0	0.70	mg/L			09/25/17 21:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:41	5
Arsenic	0.00083	J	0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:41	5
Barium	0.058		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:41	5
Boron	0.024	J	0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:41	5
Calcium	0.49		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:41	5
Cobalt	0.00046	J	0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:41	5
Lead	0.00070	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:41	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		09/27/17 10:34	09/29/17 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			09/26/17 11:50	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5

Date Collected: 09/21/17 16:25

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-18

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			09/26/17 18:44	1
Fluoride	0.71		0.20	0.082	mg/L			09/26/17 18:44	1
Sulfate	19		1.0	0.70	mg/L			09/26/17 18:44	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		09/29/17 11:37	09/30/17 00:46	5
Arsenic	0.00070	J	0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:46	5
Barium	0.48		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:46	5
Beryllium	0.00068	J	0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:46	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:46	5
Calcium	8.0		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:46	5
Cobalt	0.0093		0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:46	5
Lithium	0.0038	J	0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:46	5
Molybdenum	0.010	J	0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:46	5
Selenium	0.0063		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:46	5
Thallium	0.00059		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:46	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	280		5.0	3.4	mg/L			09/27/17 12:10	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1

Date Collected: 09/21/17 10:55

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-19

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			09/25/17 22:18	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 22:18	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 22:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:50	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:50	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:50	5
Calcium	<0.13		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0010	J	0.0013	0.00035	mg/L		09/29/17 11:37	10/02/17 13:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:37	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			09/27/17 12:10	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FB-1
Date Collected: 09/21/17 12:15
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-20
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			09/25/17 22:41	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 22:41	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 22:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 00:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 00:55	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 00:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:55	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/30/17 00:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 00:55	5
Calcium	<0.13		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 00:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 00:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 00:55	5
Lead	0.00087	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 00:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 00:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 00:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 00:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 00:55	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/27/17 12:10	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: DUP-1
Date Collected: 09/21/17 00:00
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-21
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			09/25/17 23:04	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 23:04	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 23:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/30/17 01:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/30/17 01:22	5
Barium	0.018		0.0025	0.00049	mg/L		09/29/17 11:37	09/30/17 01:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 01:22	5
Boron	0.022	J	0.050	0.021	mg/L		09/29/17 11:37	09/30/17 01:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/30/17 01:22	5
Calcium	0.42		0.25	0.13	mg/L		09/29/17 11:37	09/30/17 01:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/30/17 01:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/30/17 01:22	5
Lead	0.00046	J	0.0013	0.00035	mg/L		09/29/17 11:37	09/30/17 01:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/30/17 01:22	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/30/17 01:22	5
Selenium	0.00042	J	0.0013	0.00024	mg/L		09/29/17 11:37	09/30/17 01:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/30/17 01:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	42		5.0	3.4	mg/L			09/27/17 12:10	1

Definitions/Glossary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

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
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A

Date Collected: 09/20/17 10:50

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 13:33	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/29/17 23:07	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 12:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 09/20/17 11:00

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 14:42	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/29/17 23:11	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 12:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWA-3A

Date Collected: 09/20/17 13:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 15:05	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/29/17 23:34	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 12:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWA-7

Date Collected: 09/20/17 16:20

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 19:16	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/29/17 23:38	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 12:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7 (FILTERED)

Lab Sample ID: 400-143704-5

Date Collected: 09/20/17 16:20

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	370850	09/25/17 15:27	TAJ	TAL PEN
Dissolved	Prep	3005A			369553	09/26/17 12:10	KWN	TAL PEN
Dissolved	Analysis	6020		5	369886	09/28/17 01:19	DRE	TAL PEN
Dissolved	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Dissolved	Analysis	7470A		1	370132	09/29/17 12:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWA-3B

Lab Sample ID: 400-143704-6

Date Collected: 09/20/17 17:15

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 15:50	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/29/17 23:43	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-143704-7

Date Collected: 09/20/17 17:15

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	370850	09/25/17 16:59	TAJ	TAL PEN
Dissolved	Prep	3005A			369553	09/26/17 12:10	KWN	TAL PEN
Dissolved	Analysis	6020		5	369886	09/28/17 01:24	DRE	TAL PEN
Dissolved	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Dissolved	Analysis	7470A		1	370132	09/29/17 13:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWC-1

Lab Sample ID: 400-143704-10

Date Collected: 09/21/17 10:25

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 17:21	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/29/17 23:47	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-4

Date Collected: 09/21/17 10:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 17:44	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:14	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWC-2

Date Collected: 09/21/17 12:00

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 18:07	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:19	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWA-5

Date Collected: 09/21/17 12:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 18:30	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:23	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWC-6

Date Collected: 09/22/17 12:45

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 19:38	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:28	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A

Lab Sample ID: 400-143704-15

Date Collected: 09/21/17 14:30

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 20:01	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:32	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWC-3

Lab Sample ID: 400-143704-16

Date Collected: 09/21/17 14:40

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 20:24	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:37	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWC-4B

Lab Sample ID: 400-143704-17

Date Collected: 09/21/17 15:40

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 21:32	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:41	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369478	09/26/17 11:50	TET	TAL PEN

Client Sample ID: GWC-5

Lab Sample ID: 400-143704-18

Date Collected: 09/21/17 16:25

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369571	09/26/17 18:44	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:46	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369725	09/27/17 12:10	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1

Lab Sample ID: 400-143704-19

Date Collected: 09/21/17 10:55

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 22:18	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:50	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	370469	10/02/17 13:36	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369725	09/27/17 12:10	RRC	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-143704-20

Date Collected: 09/21/17 12:15

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 22:41	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 00:55	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369725	09/27/17 12:10	RRC	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-143704-21

Date Collected: 09/21/17 00:00

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	369453	09/25/17 23:04	JAW	TAL PEN
Total Recoverable	Prep	3005A			370084	09/29/17 11:37	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	370289	09/30/17 01:22	DRE	TAL PEN
Total/NA	Prep	7470A			369726	09/27/17 10:34	JAP	TAL PEN
Total/NA	Analysis	7470A		1	370132	09/29/17 13:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	369725	09/27/17 12:10	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: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

HPLC/IC

Analysis Batch: 369453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total/NA	Water	300.0	
400-143704-2	GWA-2A	Total/NA	Water	300.0	
400-143704-3	GWA-3A	Total/NA	Water	300.0	
400-143704-4	GWA-7	Total/NA	Water	300.0	
400-143704-6	GWA-3B	Total/NA	Water	300.0	
400-143704-10	GWC-1	Total/NA	Water	300.0	
400-143704-11	GWA-4	Total/NA	Water	300.0	
400-143704-12	GWC-2	Total/NA	Water	300.0	
400-143704-13	GWA-5	Total/NA	Water	300.0	
400-143704-14	GWC-6	Total/NA	Water	300.0	
400-143704-15	GWC-4A	Total/NA	Water	300.0	
400-143704-16	GWC-3	Total/NA	Water	300.0	
400-143704-17	GWC-4B	Total/NA	Water	300.0	
400-143704-19	FERB-1	Total/NA	Water	300.0	
400-143704-20	FB-1	Total/NA	Water	300.0	
400-143704-21	DUP-1	Total/NA	Water	300.0	
MB 400-369453/4	Method Blank	Total/NA	Water	300.0	
LCS 400-369453/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-369453/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-143704-1 MS	GWA-1A	Total/NA	Water	300.0	
400-143704-1 MSD	GWA-1A	Total/NA	Water	300.0	

Analysis Batch: 369571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-18	GWC-5	Total/NA	Water	300.0	
MB 400-369571/21	Method Blank	Total/NA	Water	300.0	
LCS 400-369571/22	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-369571/23	Lab Control Sample Dup	Total/NA	Water	300.0	
400-143704-18 MS	GWC-5	Total/NA	Water	300.0	
400-143704-18 MSD	GWC-5	Total/NA	Water	300.0	

Analysis Batch: 370850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	300.0	
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	300.0	
MB 400-370850/4	Method Blank	Total/NA	Water	300.0	
LCS 400-370850/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-370850/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-143704-A-1 MS	400-143704-A-1 MS	Dissolved	Water	300.0	
400-143704-A-1 MSD	400-143704-A-1 MSD	Dissolved	Water	300.0	

Metals

Prep Batch: 369553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	3005A	
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	3005A	
MB 400-369553/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-369553/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-143466-G-1-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Metals (Continued)

Prep Batch: 369553 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143466-G-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 369726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total/NA	Water	7470A	
400-143704-2	GWA-2A	Total/NA	Water	7470A	
400-143704-3	GWA-3A	Total/NA	Water	7470A	
400-143704-4	GWA-7	Total/NA	Water	7470A	
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	7470A	
400-143704-6	GWA-3B	Total/NA	Water	7470A	
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	7470A	
400-143704-10	GWC-1	Total/NA	Water	7470A	
400-143704-11	GWA-4	Total/NA	Water	7470A	
400-143704-12	GWC-2	Total/NA	Water	7470A	
400-143704-13	GWA-5	Total/NA	Water	7470A	
400-143704-14	GWC-6	Total/NA	Water	7470A	
400-143704-15	GWC-4A	Total/NA	Water	7470A	
400-143704-16	GWC-3	Total/NA	Water	7470A	
400-143704-17	GWC-4B	Total/NA	Water	7470A	
400-143704-18	GWC-5	Total/NA	Water	7470A	
400-143704-19	FERB-1	Total/NA	Water	7470A	
400-143704-20	FB-1	Total/NA	Water	7470A	
400-143704-21	DUP-1	Total/NA	Water	7470A	
MB 400-369726/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-369726/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-143704-1 MS	GWA-1A	Total/NA	Water	7470A	
400-143704-1 MSD	GWA-1A	Total/NA	Water	7470A	

Analysis Batch: 369886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	6020	369553
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	6020	369553
MB 400-369553/1-A ^5	Method Blank	Total Recoverable	Water	6020	369553
LCS 400-369553/2-A	Lab Control Sample	Total Recoverable	Water	6020	369553
400-143466-G-1-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	369553
400-143466-G-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	369553

Prep Batch: 370084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total Recoverable	Water	3005A	
400-143704-2	GWA-2A	Total Recoverable	Water	3005A	
400-143704-3	GWA-3A	Total Recoverable	Water	3005A	
400-143704-4	GWA-7	Total Recoverable	Water	3005A	
400-143704-6	GWA-3B	Total Recoverable	Water	3005A	
400-143704-10	GWC-1	Total Recoverable	Water	3005A	
400-143704-11	GWA-4	Total Recoverable	Water	3005A	
400-143704-12	GWC-2	Total Recoverable	Water	3005A	
400-143704-13	GWA-5	Total Recoverable	Water	3005A	
400-143704-14	GWC-6	Total Recoverable	Water	3005A	
400-143704-15	GWC-4A	Total Recoverable	Water	3005A	
400-143704-16	GWC-3	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Metals (Continued)

Prep Batch: 370084 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-17	GWC-4B	Total Recoverable	Water	3005A	
400-143704-18	GWC-5	Total Recoverable	Water	3005A	
400-143704-19 - RA	FERB-1	Total Recoverable	Water	3005A	
400-143704-19	FERB-1	Total Recoverable	Water	3005A	
400-143704-20	FB-1	Total Recoverable	Water	3005A	
400-143704-21	DUP-1	Total Recoverable	Water	3005A	
MB 400-370084/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-370084/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-143704-2 MS	GWA-2A	Total Recoverable	Water	3005A	
400-143704-2 MSD	GWA-2A	Total Recoverable	Water	3005A	

Analysis Batch: 370132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total/NA	Water	7470A	369726
400-143704-2	GWA-2A	Total/NA	Water	7470A	369726
400-143704-3	GWA-3A	Total/NA	Water	7470A	369726
400-143704-4	GWA-7	Total/NA	Water	7470A	369726
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	7470A	369726
400-143704-6	GWA-3B	Total/NA	Water	7470A	369726
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	7470A	369726
400-143704-10	GWC-1	Total/NA	Water	7470A	369726
400-143704-11	GWA-4	Total/NA	Water	7470A	369726
400-143704-12	GWC-2	Total/NA	Water	7470A	369726
400-143704-13	GWA-5	Total/NA	Water	7470A	369726
400-143704-14	GWC-6	Total/NA	Water	7470A	369726
400-143704-15	GWC-4A	Total/NA	Water	7470A	369726
400-143704-16	GWC-3	Total/NA	Water	7470A	369726
400-143704-17	GWC-4B	Total/NA	Water	7470A	369726
400-143704-18	GWC-5	Total/NA	Water	7470A	369726
400-143704-19	FERB-1	Total/NA	Water	7470A	369726
400-143704-20	FB-1	Total/NA	Water	7470A	369726
400-143704-21	DUP-1	Total/NA	Water	7470A	369726
MB 400-369726/14-A	Method Blank	Total/NA	Water	7470A	369726
LCS 400-369726/15-A	Lab Control Sample	Total/NA	Water	7470A	369726
400-143704-1 MS	GWA-1A	Total/NA	Water	7470A	369726
400-143704-1 MSD	GWA-1A	Total/NA	Water	7470A	369726

Analysis Batch: 370289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total Recoverable	Water	6020	370084
400-143704-2	GWA-2A	Total Recoverable	Water	6020	370084
400-143704-3	GWA-3A	Total Recoverable	Water	6020	370084
400-143704-4	GWA-7	Total Recoverable	Water	6020	370084
400-143704-6	GWA-3B	Total Recoverable	Water	6020	370084
400-143704-10	GWC-1	Total Recoverable	Water	6020	370084
400-143704-11	GWA-4	Total Recoverable	Water	6020	370084
400-143704-12	GWC-2	Total Recoverable	Water	6020	370084
400-143704-13	GWA-5	Total Recoverable	Water	6020	370084
400-143704-14	GWC-6	Total Recoverable	Water	6020	370084
400-143704-15	GWC-4A	Total Recoverable	Water	6020	370084
400-143704-16	GWC-3	Total Recoverable	Water	6020	370084

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Metals (Continued)

Analysis Batch: 370289 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-17	GWC-4B	Total Recoverable	Water	6020	370084
400-143704-18	GWC-5	Total Recoverable	Water	6020	370084
400-143704-19	FERB-1	Total Recoverable	Water	6020	370084
400-143704-20	FB-1	Total Recoverable	Water	6020	370084
400-143704-21	DUP-1	Total Recoverable	Water	6020	370084
MB 400-370084/1-A ^5	Method Blank	Total Recoverable	Water	6020	370084
LCS 400-370084/2-A	Lab Control Sample	Total Recoverable	Water	6020	370084
400-143704-2 MS	GWA-2A	Total Recoverable	Water	6020	370084
400-143704-2 MSD	GWA-2A	Total Recoverable	Water	6020	370084

Analysis Batch: 370469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-19 - RA	FERB-1	Total Recoverable	Water	6020	370084

General Chemistry

Analysis Batch: 369478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total/NA	Water	SM 2540C	
400-143704-2	GWA-2A	Total/NA	Water	SM 2540C	
400-143704-3	GWA-3A	Total/NA	Water	SM 2540C	
400-143704-4	GWA-7	Total/NA	Water	SM 2540C	
400-143704-5	GWA-7 (FILTERED)	Total/NA	Water	SM 2540C	
400-143704-6	GWA-3B	Total/NA	Water	SM 2540C	
400-143704-7	GWA-3B (FILTERED)	Total/NA	Water	SM 2540C	
400-143704-10	GWC-1	Total/NA	Water	SM 2540C	
400-143704-11	GWA-4	Total/NA	Water	SM 2540C	
400-143704-12	GWC-2	Total/NA	Water	SM 2540C	
400-143704-13	GWA-5	Total/NA	Water	SM 2540C	
400-143704-14	GWC-6	Total/NA	Water	SM 2540C	
400-143704-15	GWC-4A	Total/NA	Water	SM 2540C	
400-143704-16	GWC-3	Total/NA	Water	SM 2540C	
400-143704-17	GWC-4B	Total/NA	Water	SM 2540C	
MB 400-369478/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-369478/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-143704-1 DU	GWA-1A	Total/NA	Water	SM 2540C	
400-143704-6 DU	GWA-3B	Total/NA	Water	SM 2540C	

Analysis Batch: 369725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-18	GWC-5	Total/NA	Water	SM 2540C	
400-143704-19	FERB-1	Total/NA	Water	SM 2540C	
400-143704-20	FB-1	Total/NA	Water	SM 2540C	
400-143704-21	DUP-1	Total/NA	Water	SM 2540C	
MB 400-369725/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-369725/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-143731-J-1 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-369453/4
Matrix: Water
Analysis Batch: 369453

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			09/25/17 11:16	1
Fluoride	<0.082		0.20	0.082	mg/L			09/25/17 11:16	1
Sulfate	<0.70		1.0	0.70	mg/L			09/25/17 11:16	1

Lab Sample ID: LCS 400-369453/5
Matrix: Water
Analysis Batch: 369453

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	9.67		mg/L		97	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 400-369453/6
Matrix: Water
Analysis Batch: 369453

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.68		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	10.0		mg/L		100	90 - 110	0	15

Lab Sample ID: 400-143704-1 MS
Matrix: Water
Analysis Batch: 369453

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.0		10.0	17.4		mg/L		94	80 - 120
Fluoride	<0.082		10.0	10.4		mg/L		104	80 - 120
Sulfate	<0.70		10.0	10.7		mg/L		107	80 - 120

Lab Sample ID: 400-143704-1 MSD
Matrix: Water
Analysis Batch: 369453

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.0		10.0	17.4		mg/L		94	80 - 120	0	20
Fluoride	<0.082		10.0	10.3		mg/L		103	80 - 120	1	20
Sulfate	<0.70		10.0	10.7		mg/L		107	80 - 120	0	20

Lab Sample ID: MB 400-369571/21
Matrix: Water
Analysis Batch: 369571

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			09/26/17 17:35	1
Fluoride	<0.082		0.20	0.082	mg/L			09/26/17 17:35	1
Sulfate	<0.70		1.0	0.70	mg/L			09/26/17 17:35	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-369571/22
Matrix: Water
Analysis Batch: 369571

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.75		mg/L		98	90 - 110
Fluoride	10.0	10.3		mg/L		103	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 400-369571/23
Matrix: Water
Analysis Batch: 369571

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.69		mg/L		97	90 - 110	1	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	1	15

Lab Sample ID: 400-143704-18 MS
Matrix: Water
Analysis Batch: 369571

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.4		10.0	15.5		mg/L		91	80 - 120
Fluoride	0.71		10.0	11.6		mg/L		109	80 - 120
Sulfate	19		10.0	29.2		mg/L		102	80 - 120

Lab Sample ID: 400-143704-18 MSD
Matrix: Water
Analysis Batch: 369571

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.4		10.0	15.5		mg/L		91	80 - 120	0	20
Fluoride	0.71		10.0	11.6		mg/L		109	80 - 120	0	20
Sulfate	19		10.0	29.3		mg/L		103	80 - 120	0	20

Lab Sample ID: MB 400-370850/4
Matrix: Water
Analysis Batch: 370850

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	<0.89		1.0	0.89	mg/L			09/25/17 11:16	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			09/25/17 11:16	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			09/25/17 11:16	1

Lab Sample ID: LCS 400-370850/5
Matrix: Water
Analysis Batch: 370850

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride, Dissolved	10.0	9.67		mg/L		97	90 - 110
Fluoride, Dissolved	10.0	10.2		mg/L		102	90 - 110
Sulfate, Dissolved	10.0	10.0		mg/L		100	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-370850/6
Matrix: Water
Analysis Batch: 370850

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, Dissolved	10.0	9.68		mg/L		97	90 - 110	0	15
Fluoride, Dissolved	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate, Dissolved	10.0	10.0		mg/L		100	90 - 110	0	15

Lab Sample ID: 400-143704-A-1 MS
Matrix: Water
Analysis Batch: 370850

Client Sample ID: 400-143704-A-1 MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride, Dissolved	8.0		10.0	17.4		mg/L		94	80 - 120		
Fluoride, Dissolved	<0.082		10.0	10.4		mg/L		104	80 - 120		
Sulfate, Dissolved	<0.70		10.0	10.7		mg/L		107	80 - 120		

Lab Sample ID: 400-143704-A-1 MSD
Matrix: Water
Analysis Batch: 370850

Client Sample ID: 400-143704-A-1 MSD
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride, Dissolved	8.0		10.0	17.4		mg/L		94	80 - 120	0	20
Fluoride, Dissolved	<0.082		10.0	10.3		mg/L		103	80 - 120	1	20
Sulfate, Dissolved	<0.70		10.0	10.7		mg/L		107	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-369553/1-A ^5
Matrix: Water
Analysis Batch: 369886

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 369553

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		09/26/17 12:10	09/27/17 22:19	5
Barium, Dissolved	<0.00049		0.0025	0.00049	mg/L		09/26/17 12:10	09/27/17 22:19	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/26/17 12:10	09/27/17 22:19	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		09/26/17 12:10	09/27/17 22:19	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		09/26/17 12:10	09/27/17 22:19	5
Calcium, Dissolved	<0.13		0.25	0.13	mg/L		09/26/17 12:10	09/27/17 22:19	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		09/26/17 12:10	09/27/17 22:19	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		09/26/17 12:10	09/27/17 22:19	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		09/26/17 12:10	09/27/17 22:19	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		09/26/17 12:10	09/27/17 22:19	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		09/26/17 12:10	09/27/17 22:19	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		09/26/17 12:10	09/27/17 22:19	5
Lithium, Dissolved	<0.0032		0.0050	0.0032	mg/L		09/26/17 12:10	09/27/17 22:19	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		09/26/17 12:10	09/27/17 22:19	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: LCS 400-369553/2-A
Matrix: Water
Analysis Batch: 369886

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 369553

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic, Dissolved	0.0500	0.0519		mg/L		104	80 - 120
Barium, Dissolved	0.0500	0.0502		mg/L		100	80 - 120
Beryllium, Dissolved	0.0500	0.0502		mg/L		100	80 - 120
Boron, Dissolved	0.100	0.0995		mg/L		99	80 - 120
Cadmium, Dissolved	0.0500	0.0522		mg/L		104	80 - 120
Calcium, Dissolved	5.00	4.83		mg/L		97	80 - 120
Chromium, Dissolved	0.0500	0.0504		mg/L		101	80 - 120
Cobalt, Dissolved	0.0500	0.0508		mg/L		102	80 - 120
Lead, Dissolved	0.0500	0.0521		mg/L		104	80 - 120
Antimony, Dissolved	0.0500	0.0522		mg/L		104	80 - 120
Molybdenum, Dissolved	0.100	0.103		mg/L		103	80 - 120
Selenium, Dissolved	0.0500	0.0509		mg/L		102	80 - 120
Lithium, Dissolved	0.0500	0.0538		mg/L		108	80 - 120
Thallium, Dissolved	0.0100	0.0104		mg/L		104	80 - 120

Lab Sample ID: 400-143466-G-1-C MS ^5
Matrix: Water
Analysis Batch: 369886

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 369553

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic, Dissolved	0.0033		0.0500	0.0572		mg/L		108	75 - 125
Barium, Dissolved	3.3		0.0500	3.39	4	mg/L		216	75 - 125
Beryllium, Dissolved	<0.00034		0.0500	0.0519		mg/L		104	75 - 125
Boron, Dissolved	0.15		0.100	0.260		mg/L		112	75 - 125
Cadmium, Dissolved	<0.00034		0.0500	0.0527		mg/L		105	75 - 125
Calcium, Dissolved	38		5.00	43.1	4	mg/L		109	75 - 125
Chromium, Dissolved	<0.0011		0.0500	0.0526		mg/L		105	75 - 125
Cobalt, Dissolved	0.00075	J	0.0500	0.0528		mg/L		104	75 - 125
Lead, Dissolved	<0.00035		0.0500	0.0522		mg/L		104	75 - 125
Antimony, Dissolved	<0.0010		0.0500	0.0559		mg/L		112	75 - 125
Molybdenum, Dissolved	<0.00085		0.100	0.110		mg/L		110	75 - 125
Selenium, Dissolved	<0.00024		0.0500	0.0547		mg/L		109	75 - 125
Lithium, Dissolved	<0.0032		0.0500	0.0549		mg/L		110	75 - 125
Thallium, Dissolved	0.00028	J	0.0100	0.0108		mg/L		106	75 - 125

Lab Sample ID: 400-143466-G-1-D MSD ^5
Matrix: Water
Analysis Batch: 369886

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 369553

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic, Dissolved	0.0033		0.0500	0.0576		mg/L		109	75 - 125	1	20
Barium, Dissolved	3.3		0.0500	3.35	4	mg/L		147	75 - 125	1	20
Beryllium, Dissolved	<0.00034		0.0500	0.0511		mg/L		102	75 - 125	2	20
Boron, Dissolved	0.15		0.100	0.253		mg/L		105	75 - 125	3	20
Cadmium, Dissolved	<0.00034		0.0500	0.0516		mg/L		103	75 - 125	2	20
Calcium, Dissolved	38		5.00	42.4	4	mg/L		94	75 - 125	2	20
Chromium, Dissolved	<0.0011		0.0500	0.0518		mg/L		104	75 - 125	1	20
Cobalt, Dissolved	0.00075	J	0.0500	0.0527		mg/L		104	75 - 125	0	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: 400-143466-G-1-D MSD ^5
Matrix: Water
Analysis Batch: 369886

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 369553

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead, Dissolved	<0.00035		0.0500	0.0516		mg/L		103	75 - 125	1	20
Antimony, Dissolved	<0.0010		0.0500	0.0541		mg/L		108	75 - 125	3	20
Molybdenum, Dissolved	<0.00085		0.100	0.105		mg/L		105	75 - 125	4	20
Selenium, Dissolved	<0.00024		0.0500	0.0522		mg/L		104	75 - 125	5	20
Lithium, Dissolved	<0.0032		0.0500	0.0532		mg/L		106	75 - 125	3	20
Thallium, Dissolved	0.00028	J	0.0100	0.0106		mg/L		103	75 - 125	3	20

Lab Sample ID: MB 400-370084/1-A ^5
Matrix: Water
Analysis Batch: 370289

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 370084

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/29/17 11:37	09/29/17 22:31	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/29/17 11:37	09/29/17 22:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 22:31	5
Boron	<0.021		0.050	0.021	mg/L		09/29/17 11:37	09/29/17 22:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/29/17 11:37	09/29/17 22:31	5
Calcium	<0.13		0.25	0.13	mg/L		09/29/17 11:37	09/29/17 22:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/29/17 11:37	09/29/17 22:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/29/17 11:37	09/29/17 22:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/29/17 11:37	09/29/17 22:31	5
Antimony	<0.0010		0.0025	0.0010	mg/L		09/29/17 11:37	09/29/17 22:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/29/17 11:37	09/29/17 22:31	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/29/17 11:37	09/29/17 22:31	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/29/17 11:37	09/29/17 22:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/29/17 11:37	09/29/17 22:31	5

Lab Sample ID: LCS 400-370084/2-A
Matrix: Water
Analysis Batch: 370289

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 370084

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0537		mg/L		107	80 - 120
Barium	0.0500	0.0531		mg/L		106	80 - 120
Beryllium	0.0500	0.0522		mg/L		104	80 - 120
Boron	0.100	0.0945		mg/L		94	80 - 120
Cadmium	0.0500	0.0503		mg/L		101	80 - 120
Calcium	5.00	4.92		mg/L		98	80 - 120
Chromium	0.0500	0.0506		mg/L		101	80 - 120
Cobalt	0.0500	0.0499		mg/L		100	80 - 120
Lead	0.0500	0.0512		mg/L		102	80 - 120
Antimony	0.0500	0.0518		mg/L		104	80 - 120
Molybdenum	0.100	0.101		mg/L		101	80 - 120
Selenium	0.0500	0.0519		mg/L		104	80 - 120
Lithium	0.0500	0.0542		mg/L		108	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: 400-143704-2 MS
Matrix: Water
Analysis Batch: 370289

Client Sample ID: GWA-2A
Prep Type: Total Recoverable
Prep Batch: 370084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits	%Rec.
				Result	Qualifier					
Arsenic	<0.00046		0.0500	0.0556		mg/L		111	75 - 125	
Barium	0.039		0.0500	0.0933		mg/L		109	75 - 125	
Beryllium	<0.00034		0.0500	0.0533		mg/L		107	75 - 125	
Boron	<0.021		0.100	0.0961		mg/L		96	75 - 125	
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	
Calcium	3.2		5.00	8.07		mg/L		97	75 - 125	
Chromium	<0.0011		0.0500	0.0511		mg/L		102	75 - 125	
Cobalt	0.00044	J	0.0500	0.0515		mg/L		102	75 - 125	
Lead	0.0058	F2 F1	0.0500	0.0835	F1	mg/L		155	75 - 125	
Antimony	<0.0010		0.0500	0.0546		mg/L		109	75 - 125	
Molybdenum	<0.00085		0.100	0.104		mg/L		104	75 - 125	
Selenium	0.00041	J	0.0500	0.0554		mg/L		110	75 - 125	
Lithium	0.011		0.0500	0.0635		mg/L		105	75 - 125	
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125	

Lab Sample ID: 400-143704-2 MSD
Matrix: Water
Analysis Batch: 370289

Client Sample ID: GWA-2A
Prep Type: Total Recoverable
Prep Batch: 370084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Arsenic	<0.00046		0.0500	0.0544		mg/L		109	75 - 125	2	20
Barium	0.039		0.0500	0.0919		mg/L		106	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0539		mg/L		108	75 - 125	1	20
Boron	<0.021		0.100	0.0916		mg/L		92	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	1	20
Calcium	3.2		5.00	8.04		mg/L		97	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0505		mg/L		101	75 - 125	1	20
Cobalt	0.00044	J	0.0500	0.0514		mg/L		102	75 - 125	0	20
Lead	0.0058	F2 F1	0.0500	0.0529	F2	mg/L		94	75 - 125	45	20
Antimony	<0.0010		0.0500	0.0526		mg/L		105	75 - 125	4	20
Molybdenum	<0.00085		0.100	0.100		mg/L		100	75 - 125	3	20
Selenium	0.00041	J	0.0500	0.0539		mg/L		107	75 - 125	3	20
Lithium	0.011		0.0500	0.0649		mg/L		108	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-369726/14-A
Matrix: Water
Analysis Batch: 370132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 369726

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 12:40	1
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		09/27/17 10:34	09/29/17 12:40	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
SDG: McIntosh Ash Disposal Area 3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 400-369726/15-A
Matrix: Water
Analysis Batch: 370132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 369726

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000956		mg/L		95	80 - 120
Mercury, Dissolved	0.00101	0.000956		mg/L		95	80 - 120

Lab Sample ID: 400-143704-1 MS
Matrix: Water
Analysis Batch: 370132

Client Sample ID: GWA-1A
Prep Type: Total/NA
Prep Batch: 369726

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00193		mg/L		96	80 - 120
Mercury, Dissolved	<0.000070		0.00201	0.00193		mg/L		96	80 - 120

Lab Sample ID: 400-143704-1 MSD
Matrix: Water
Analysis Batch: 370132

Client Sample ID: GWA-1A
Prep Type: Total/NA
Prep Batch: 369726

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00185		mg/L		92	80 - 120	4	20
Mercury, Dissolved	<0.000070		0.00201	0.00185		mg/L		92	80 - 120	4	20

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

Lab Sample ID: MB 400-369478/1
Matrix: Water
Analysis Batch: 369478

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			09/26/17 11:50	1

Lab Sample ID: LCS 400-369478/2
Matrix: Water
Analysis Batch: 369478

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	286		mg/L		98	78 - 122

Lab Sample ID: 400-143704-1 DU
Matrix: Water
Analysis Batch: 369478

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	26		26.0		mg/L		0	5

Lab Sample ID: 400-143704-6 DU
Matrix: Water
Analysis Batch: 369478

Client Sample ID: GWA-3B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	56		56.0		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-143704-1
 SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: MB 400-369725/1
Matrix: Water
Analysis Batch: 369725

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			09/27/17 12:10	1

Lab Sample ID: LCS 400-369725/2
Matrix: Water
Analysis Batch: 369725

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	293	284		mg/L		97	78 - 122

Lab Sample ID: 400-143731-J-1 DU
Matrix: Water
Analysis Batch: 369725

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	40		40.0		mg/L		0	5

Chain of Custody Record

COG No:

Carrier Tracking No(s):

Lab P/M:
Whitmore, Cheyenne R

Sampler:
V. Thomas P-J; M. Thomas -C-J

Page: 1 of 1

Job #:

E-Mail:
cheyenne.whitmore@testamericainc.com

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:
Impetty@southernco.com

Project Name:
Plant McIntosh - Landfill #3

Site:
CCR

Due Date Requested:

TAI Requested (days):

PO #:

WO #:

Project #:

SSOW#:

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - decahydrate
H - Acetone
I - MCAA
J - pH 4-5
K - other (specify)

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	I	D	D	Special Instructions/Note:
GWC-6	9/22/17	1245	G	GW		X	X	X	Total Number of containers: 3

Possible Hazard Identification
 Non-Hazard
 Flammable
 Skin Irritant
 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:

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Custody Seal Intact:
 Yes No

Custody Seal No.:

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Relinquished by: *Lauren Petty*

Cooler Temperature(s) °C and Other Remarks:
 8.5°C, 0.5°C IR

Method of Shipment:

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Date/Time: 9-22-17 1445

Date/Time: 9-22-17 1800

Date/Time: 9-23-17 9:16

Chain of Custody Record

3355 McLemore Drive
Pensacola, FL 32514
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: lmpetty@southernco.com
 Project Name: Plant McIntosh - Landfill #3
 Site: CCR

Sampler: V. Thomas T-7; M. Thomas -327
Lab PM: Whitmire, Cheyenne R
Phone: cheyenne.whitmire@testamericainc.com
Lab Mail: cheyenne.whitmire@testamericainc.com

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #:
SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, AA=)	Preservation Code:		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Metals - (Part 257 Appendix III & (V) EPA 6020 & EPA 7470)	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of containers	Special Instructions/Note:
					I	D						
GWC-4A	9/21/17	1430	G	GW	X	X	X	X	X	X	3	
GWC-3	9/21/17	1440	G	GW	X	X	X	X	X	X	3	
GWC-4B	9/21/17	1540	G	GW	X	X	X	X	X	X	4	Extra Volume for Radium Analysis
GWC-5	9/21/17	1625	G	GW	X	X	X	X	X	X	3	
FERB-1	9/21/17	1055	G	GW	X	X	X	X	X	X	3	
FB-1	9/21/17	1215	G	GW	X	X	X	X	X	X	3	
DUP-1	9/21/17	-	G	GW	X	X	X	X	X	X	3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *Julian-pur* Date: 9-22-17 0829
 Relinquished by: *Joseph Woods* Date: 9/21/17 1800
 Relinquished by: _____ Date: _____

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:
 Method of Shipment: _____
 Received by: *MSJ* Date/Time: 9/22/17 8:29 Company: _____
 Received by: *[Signature]* Date/Time: _____ Company: _____
 Received by: *[Signature]* Date/Time: 9-23-17 9:16 Company: _____

Custody Seals Intact [Custody Seal No.: 2.58, 0.58, 12]
 Cooler Temperature(s) and Other Remarks: 50.9, 51.0, 50.9, 51.0, 50.6, 51.0, 51.0



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-143704-1
SDG Number: McIntosh Ash Disposal Area 3

Login Number: 143704

List Number: 1

Creator: Edwards, Robin 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.	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	2.5°C, 0.5°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: 400-143704-1
 SDG: McIntosh Ash Disposal Area 3

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-143704-2

TestAmerica SDG: McIntosh Ash Disposal Area 3

Client Project/Site: CCR - Plant McIntosh

Sampling Event: Landfill #3 Bi-Monthly

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

10/24/2017 4:10:15 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.

1

2

3

4

5

6

7

8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Method Summary	3
Sample Summary	4
Client Sample Results	5
Definitions	24
Chronicle	25
QC Association	30
QC Sample Results	31
Chain of Custody	33
Receipt Checklists	36
Certification Summary	38

Method Summary

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-143704-1	GWA-1A	Water	09/20/17 10:50	09/23/17 09:16
400-143704-2	GWA-2A	Water	09/20/17 11:00	09/23/17 09:16
400-143704-3	GWA-3A	Water	09/20/17 13:40	09/23/17 09:16
400-143704-4	GWA-7	Water	09/20/17 16:20	09/23/17 09:16
400-143704-5	GWA-7 (FILTERED)	Water	09/20/17 16:20	09/23/17 09:16
400-143704-6	GWA-3B	Water	09/20/17 17:15	09/23/17 09:16
400-143704-7	GWA-3B (FILTERED)	Water	09/20/17 17:15	09/23/17 09:16
400-143704-10	GWC-1	Water	09/21/17 10:25	09/23/17 09:16
400-143704-11	GWA-4	Water	09/21/17 10:40	09/23/17 09:16
400-143704-12	GWC-2	Water	09/21/17 12:00	09/23/17 09:16
400-143704-13	GWA-5	Water	09/21/17 12:40	09/23/17 09:16
400-143704-14	GWC-6	Water	09/22/17 12:45	09/23/17 09:16
400-143704-15	GWC-4A	Water	09/21/17 14:30	09/23/17 09:16
400-143704-16	GWC-3	Water	09/21/17 14:40	09/23/17 09:16
400-143704-17	GWC-4B	Water	09/21/17 15:40	09/23/17 09:16
400-143704-18	GWC-5	Water	09/21/17 16:25	09/23/17 09:16
400-143704-19	FERB-1	Water	09/21/17 10:55	09/23/17 09:16
400-143704-20	FB-1	Water	09/21/17 12:15	09/23/17 09:16
400-143704-21	DUP-1	Water	09/21/17 00:00	09/23/17 09:16

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A

Date Collected: 09/20/17 10:50

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-1

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	0.133		0.0711	0.0721	1.00	0.0850	pCi/L	09/27/17 08:02	10/19/17 06:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/27/17 08:02	10/19/17 06:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.593		0.250	0.256	1.00	0.352	pCi/L	09/27/17 08:38	10/03/17 09:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/27/17 08:38	10/03/17 09:42	1
Y Carrier	85.2		40 - 110					09/27/17 08:38	10/03/17 09:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.727		0.260	0.266	5.00	0.352	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A
Date Collected: 09/20/17 11:00
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-2
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	0.172		0.0761	0.0777	1.00	0.0829	pCi/L	09/27/17 08:02	10/19/17 06:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					09/27/17 08:02	10/19/17 06:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.363		0.215	0.217	1.00	0.324	pCi/L	09/27/17 08:38	10/03/17 09:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					09/27/17 08:38	10/03/17 09:42	1
Y Carrier	87.9		40 - 110					09/27/17 08:38	10/03/17 09:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.535		0.228	0.230	5.00	0.324	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3A
Date Collected: 09/20/17 13:40
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-3
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	0.213		0.0842	0.0863	1.00	0.0829	pCi/L	09/27/17 08:02	10/19/17 06:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					09/27/17 08:02	10/19/17 06:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0984	U	0.190	0.190	1.00	0.325	pCi/L	09/27/17 08:38	10/03/17 09:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					09/27/17 08:38	10/03/17 09:42	1
Y Carrier	84.5		40 - 110					09/27/17 08:38	10/03/17 09:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.311	U	0.208	0.209	5.00	0.325	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7

Date Collected: 09/20/17 16:20

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-4

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	0.173		0.0729	0.0746	1.00	0.0698	pCi/L	09/27/17 08:02	10/19/17 06:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/27/17 08:02	10/19/17 06:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.410		0.217	0.220	1.00	0.317	pCi/L	09/27/17 08:38	10/03/17 09:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/27/17 08:38	10/03/17 09:42	1
Y Carrier	85.6		40 - 110					09/27/17 08:38	10/03/17 09:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.583		0.229	0.232	5.00	0.317	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7 (FILTERED)

Lab Sample ID: 400-143704-5

Date Collected: 09/20/17 16:20

Matrix: Water

Date Received: 09/23/17 09:16

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0678	U	0.0529	0.0533	1.00	0.0745	pCi/L	09/27/17 08:02	10/19/17 06:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					09/27/17 08:02	10/19/17 06:14	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.243	U	0.197	0.198	1.00	0.310	pCi/L	09/27/17 08:38	10/03/17 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					09/27/17 08:38	10/03/17 09:43	1
Y Carrier	84.5		40 - 110					09/27/17 08:38	10/03/17 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.311		0.204	0.205	5.00	0.310	pCi/L		10/23/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B

Date Collected: 09/20/17 17:15

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-6

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	0.176		0.0732	0.0749	1.00	0.0682	pCi/L	09/27/17 08:02	10/19/17 06:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					09/27/17 08:02	10/19/17 06:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.606		0.254	0.260	1.00	0.354	pCi/L	09/27/17 08:38	10/03/17 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					09/27/17 08:38	10/03/17 09:43	1
Y Carrier	83.7		40 - 110					09/27/17 08:38	10/03/17 09:43	1

Method: Ra226_Ra228 - Combined Radium-226 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		0.264	0.271	5.00	0.354	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B (FILTERED)

Lab Sample ID: 400-143704-7

Date Collected: 09/20/17 17:15

Matrix: Water

Date Received: 09/23/17 09:16

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.107		0.0627	0.0635	1.00	0.0784	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					09/27/17 08:02	10/19/17 06:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.02		0.265	0.281	1.00	0.310	pCi/L	09/27/17 08:38	10/03/17 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					09/27/17 08:38	10/03/17 09:43	1
Y Carrier	81.5		40 - 110					09/27/17 08:38	10/03/17 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.13		0.272	0.288	5.00	0.310	pCi/L		10/23/17 10:31	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-1
Date Collected: 09/21/17 10:25
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-10
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	0.124		0.0645	0.0655	1.00	0.0758	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/27/17 08:02	10/19/17 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	0.138	U	0.169	0.170	1.00	0.280	pCi/L	09/27/17 08:38	10/03/17 09:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/27/17 08:38	10/03/17 09:43	1
Y Carrier	86.0		40 - 110					09/27/17 08:38	10/03/17 09:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.262	U	0.181	0.182	5.00	0.280	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-4
Date Collected: 09/21/17 10:40
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-11
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	0.203		0.0777	0.0799	1.00	0.0812	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					09/27/17 08:02	10/19/17 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	0.453		0.214	0.218	1.00	0.307	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	86.7		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.656		0.228	0.232	5.00	0.307	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2
Date Collected: 09/21/17 12:00
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-12
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	0.296		0.0895	0.0933	1.00	0.0769	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					09/27/17 08:02	10/19/17 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	0.625		0.230	0.237	1.00	0.309	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	83.7		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.921		0.247	0.255	5.00	0.309	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-5
Date Collected: 09/21/17 12:40
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-13
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	0.440		0.112	0.119	1.00	0.0785	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/27/17 08:02	10/19/17 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	1.26		0.296	0.317	1.00	0.333	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	82.2		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.70		0.316	0.339	5.00	0.333	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-6

Date Collected: 09/22/17 12:45

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-14

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	0.236		0.0799	0.0827	1.00	0.0623	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					09/27/17 08:02	10/19/17 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	0.690		0.232	0.241	1.00	0.299	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	86.7		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.926		0.245	0.255	5.00	0.299	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A

Date Collected: 09/21/17 14:30

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-15

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	0.279		0.0918	0.0952	1.00	0.0798	pCi/L	09/27/17 08:02	10/19/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					09/27/17 08:02	10/19/17 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	0.590		0.242	0.248	1.00	0.339	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	87.5		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.870		0.259	0.266	5.00	0.339	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-3

Date Collected: 09/21/17 14:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-16

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	0.251		0.0829	0.0860	1.00	0.0654	pCi/L	09/27/17 08:02	10/19/17 06:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					09/27/17 08:02	10/19/17 06:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.664		0.243	0.251	1.00	0.332	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	86.0		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.916		0.257	0.265	5.00	0.332	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4B

Date Collected: 09/21/17 15:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-17

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	0.138		0.0642	0.0654	1.00	0.0659	pCi/L	09/27/17 08:02	10/19/17 06:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					09/27/17 08:02	10/19/17 06:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.975		0.303	0.316	1.00	0.412	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	84.9		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.11		0.310	0.323	5.00	0.412	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5

Date Collected: 09/21/17 16:25

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-18

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	1.83		0.206	0.264	1.00	0.0497	pCi/L	09/27/17 08:02	10/19/17 06:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					09/27/17 08:02	10/19/17 06:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.50		0.395	0.509	1.00	0.308	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	86.0		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.33		0.445	0.573	5.00	0.308	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1

Date Collected: 09/21/17 10:55

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-19

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	0.00363	U	0.0252	0.0252	1.00	0.0567	pCi/L	09/27/17 08:02	10/19/17 06:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					09/27/17 08:02	10/19/17 06:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.899		0.238	0.252	1.00	0.281	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	90.1		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.903		0.239	0.253	5.00	0.281	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FB-1
Date Collected: 09/21/17 12:15
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-20
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0184	U	0.0323	0.0324	1.00	0.0583	pCi/L	09/27/17 08:02	10/19/17 06:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					09/27/17 08:02	10/19/17 06:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.214	U	0.177	0.178	1.00	0.280	pCi/L	09/27/17 08:38	10/03/17 09:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					09/27/17 08:38	10/03/17 09:44	1
Y Carrier	89.0		40 - 110					09/27/17 08:38	10/03/17 09:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.233	U	0.180	0.181	5.00	0.280	pCi/L		10/23/17 10:32	1

Client Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: DUP-1
Date Collected: 09/21/17 00:00
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-21
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	0.147		0.0625	0.0638	1.00	0.0521	pCi/L	09/27/17 08:02	10/19/17 06:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/27/17 08:02	10/19/17 06:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.296	U	0.214	0.216	1.00	0.335	pCi/L	09/27/17 08:38	10/03/17 09:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/27/17 08:38	10/03/17 09:45	1
Y Carrier	86.0		40 - 110					09/27/17 08:38	10/03/17 09:45	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	0.443		0.223	0.225	5.00	0.335	pCi/L		10/23/17 10:32	1

Definitions/Glossary

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Qualifiers

Rad

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A

Date Collected: 09/20/17 10:50

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:42	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWA-2A

Date Collected: 09/20/17 11:00

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:42	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWA-3A

Date Collected: 09/20/17 13:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:42	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWA-7

Date Collected: 09/20/17 16:20

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:42	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-7 (FILTERED)

Date Collected: 09/20/17 16:20
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Dissolved	Analysis	9315		1	332590	10/19/17 06:14	CDR	TAL SL
Dissolved	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Dissolved	Analysis	9320		1	330104	10/03/17 09:43	ALD	TAL SL
Dissolved	Analysis	Ra226_Ra228		1	333390	10/23/17 10:31	RTM	TAL SL

Client Sample ID: GWA-3B

Date Collected: 09/20/17 17:15
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:43	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWA-3B (FILTERED)

Date Collected: 09/20/17 17:15
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Dissolved	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Dissolved	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Dissolved	Analysis	9320		1	330104	10/03/17 09:43	ALD	TAL SL
Dissolved	Analysis	Ra226_Ra228		1	333390	10/23/17 10:31	RTM	TAL SL

Client Sample ID: GWC-1

Date Collected: 09/21/17 10:25
Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:43	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-4

Date Collected: 09/21/17 10:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWC-2

Date Collected: 09/21/17 12:00

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWA-5

Date Collected: 09/21/17 12:40

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWC-6

Date Collected: 09/22/17 12:45

Date Received: 09/23/17 09:16

Lab Sample ID: 400-143704-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A

Lab Sample ID: 400-143704-15

Date Collected: 09/21/17 14:30

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332590	10/19/17 06:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWC-3

Lab Sample ID: 400-143704-16

Date Collected: 09/21/17 14:40

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332591	10/19/17 06:18	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWC-4B

Lab Sample ID: 400-143704-17

Date Collected: 09/21/17 15:40

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332591	10/19/17 06:18	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: GWC-5

Lab Sample ID: 400-143704-18

Date Collected: 09/21/17 16:25

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332591	10/19/17 06:18	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1

Lab Sample ID: 400-143704-19

Date Collected: 09/21/17 10:55

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332591	10/19/17 06:19	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-143704-20

Date Collected: 09/21/17 12:15

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332591	10/19/17 06:19	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-143704-21

Date Collected: 09/21/17 00:00

Matrix: Water

Date Received: 09/23/17 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			329137	09/27/17 08:02	LDE	TAL SL
Total/NA	Analysis	9315		1	332591	10/19/17 06:19	CDR	TAL SL
Total/NA	Prep	PrecSep_0			329139	09/27/17 08:38	LDE	TAL SL
Total/NA	Analysis	9320		1	330104	10/03/17 09:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	333391	10/23/17 10:32	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: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

Rad

Prep Batch: 329137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total/NA	Water	PrecSep-21	
400-143704-2	GWA-2A	Total/NA	Water	PrecSep-21	
400-143704-3	GWA-3A	Total/NA	Water	PrecSep-21	
400-143704-4	GWA-7	Total/NA	Water	PrecSep-21	
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	PrecSep-21	
400-143704-6	GWA-3B	Total/NA	Water	PrecSep-21	
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	PrecSep-21	
400-143704-10	GWC-1	Total/NA	Water	PrecSep-21	
400-143704-11	GWA-4	Total/NA	Water	PrecSep-21	
400-143704-12	GWC-2	Total/NA	Water	PrecSep-21	
400-143704-13	GWA-5	Total/NA	Water	PrecSep-21	
400-143704-14	GWC-6	Total/NA	Water	PrecSep-21	
400-143704-15	GWC-4A	Total/NA	Water	PrecSep-21	
400-143704-16	GWC-3	Total/NA	Water	PrecSep-21	
400-143704-17	GWC-4B	Total/NA	Water	PrecSep-21	
400-143704-18	GWC-5	Total/NA	Water	PrecSep-21	
400-143704-19	FERB-1	Total/NA	Water	PrecSep-21	
400-143704-20	FB-1	Total/NA	Water	PrecSep-21	
400-143704-21	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-329137/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-329137/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-143704-17 DU	GWC-4B	Total/NA	Water	PrecSep-21	

Prep Batch: 329139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-143704-1	GWA-1A	Total/NA	Water	PrecSep_0	
400-143704-2	GWA-2A	Total/NA	Water	PrecSep_0	
400-143704-3	GWA-3A	Total/NA	Water	PrecSep_0	
400-143704-4	GWA-7	Total/NA	Water	PrecSep_0	
400-143704-5	GWA-7 (FILTERED)	Dissolved	Water	PrecSep_0	
400-143704-6	GWA-3B	Total/NA	Water	PrecSep_0	
400-143704-7	GWA-3B (FILTERED)	Dissolved	Water	PrecSep_0	
400-143704-10	GWC-1	Total/NA	Water	PrecSep_0	
400-143704-11	GWA-4	Total/NA	Water	PrecSep_0	
400-143704-12	GWC-2	Total/NA	Water	PrecSep_0	
400-143704-13	GWA-5	Total/NA	Water	PrecSep_0	
400-143704-14	GWC-6	Total/NA	Water	PrecSep_0	
400-143704-15	GWC-4A	Total/NA	Water	PrecSep_0	
400-143704-16	GWC-3	Total/NA	Water	PrecSep_0	
400-143704-17	GWC-4B	Total/NA	Water	PrecSep_0	
400-143704-18	GWC-5	Total/NA	Water	PrecSep_0	
400-143704-19	FERB-1	Total/NA	Water	PrecSep_0	
400-143704-20	FB-1	Total/NA	Water	PrecSep_0	
400-143704-21	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-329139/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-329139/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-143704-17 DU	GWC-4B	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-329137/1-A
Matrix: Water
Analysis Batch: 332590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 329137

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.009583	U	0.0352	0.0352	1.00	0.0703	pCi/L	09/27/17 08:02	10/19/17 06:13	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					09/27/17 08:02	10/19/17 06:13	1

Lab Sample ID: LCS 160-329137/2-A
Matrix: Water
Analysis Batch: 332590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 329137

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	9.60	9.825		1.01	1.00	0.0634	pCi/L	102	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: 400-143704-17 DU
Matrix: Water
Analysis Batch: 332591

Client Sample ID: GWC-4B
Prep Type: Total/NA
Prep Batch: 329137

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.138		0.1935		0.0750	1.00	0.0599	pCi/L	0.39	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	98.8		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-329139/1-A
Matrix: Water
Analysis Batch: 330104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 329139

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2955	U	0.214	0.215	1.00	0.332	pCi/L	09/27/17 08:38	10/03/17 09:42	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					09/27/17 08:38	10/03/17 09:42	1
Y Carrier	84.9		40 - 110					09/27/17 08:38	10/03/17 09:42	1

QC Sample Results

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

TestAmerica Job ID: 400-143704-2
 SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: LCS 160-329139/2-A
Matrix: Water
Analysis Batch: 330104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 329139

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	12.8	14.31		1.51	1.00	0.281	pCi/L	112	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: 400-143704-17 DU
Matrix: Water
Analysis Batch: 330104

Client Sample ID: GWC-4B
Prep Type: Total/NA
Prep Batch: 329139

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.975		0.5641		0.259	1.00	0.367	pCi/L	0.72	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	85.2		40 - 110

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

Lab Sample ID: 400-143704-17 DU
Matrix: Water
Analysis Batch: 333391

Client Sample ID: GWC-4B
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		0.7576		0.270	5.00	0.367	pCi/L	0.60	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-143704-2
SDG Number: McIntosh Ash Disposal Area 3

Login Number: 143704

List Number: 1

Creator: Edwards, Robin 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.	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	2.5°C, 0.5°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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-143704-2
SDG Number: McIntosh Ash Disposal Area 3

Login Number: 143704
List Number: 2
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis
List Creation: 09/26/17 04:59 PM

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.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0, 19.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

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

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18
North Dakota	State Program	8	R207	06-30-18

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 400-143704-2
SDG: McIntosh Ash Disposal Area 3

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
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18

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: 400-148359-1

TestAmerica SDG: McIntosh Ash Disposal Area 3

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/8/2018 3:48:50 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	10
Sample Summary	11
Client Sample Results	12
Definitions	31
Chronicle	32
QC Association	37
QC Sample Results	41
Chain of Custody	48
Receipt Checklists	50
Certification Summary	51

Case Narrative

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Job ID: 400-148359-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-148359-1

General Chemistry

Method(s) SM 2540C: The following samples were analyzed outside of analytical holding time due to analyst oversight:
GWA-2A-20180108-01 (400-148359-1), GWA-1A-20180108-01 (400-148359-2) and DUP-1-20180109-01 (400-148359-12).

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A-20180108-01

Lab Sample ID: 400-148359-1

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
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0013		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24	H	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-1A-20180108-01

Lab Sample ID: 400-148359-2

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
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0038		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0011	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0019		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16	H	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1-20180109-01

Lab Sample ID: 400-148359-3

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
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.025	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	0.16	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.00041	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3A-20180109-01

Lab Sample ID: 400-148359-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.050		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0038		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: 400-148359-1
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3A-20180109-01 (Continued)

Lab Sample ID: 400-148359-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0041	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00039	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-2-20180109-01

Lab Sample ID: 400-148359-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.059		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.023	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Zinc	0.0079	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Chromium	0.0030		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00092	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00028	J	0.0013	0.00024	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-4-20180109-01

Lab Sample ID: 400-148359-6

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	3.0		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00086	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Copper	0.0025		0.0025	0.0021	mg/L	5		6020	Total Recoverable
Vanadium	0.0072		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	1.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Zinc	0.0072	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Chromium	0.0087		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0023		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00054	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		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: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B-20180109-01

Lab Sample ID: 400-148359-7

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
Sulfate	9.8		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	0.058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.026	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00070	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	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-3-20180109-01

Lab Sample ID: 400-148359-8

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
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0035		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00053	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0095		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	18		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-4A-20180109-01

Lab Sample ID: 400-148359-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.79	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
Calcium	0.38		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	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-5-20180109-01

Lab Sample ID: 400-148359-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.9		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	25		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00064	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-5-20180109-01 (Continued)

Lab Sample ID: 400-148359-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.13		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.042	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Vanadium	0.0027		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	4.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Zinc	0.014	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Chromium	0.0019	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00059	J	0.0013	0.00035	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-4B-20180109-01

Lab Sample ID: 400-148359-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.81	J	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	0.17	J	0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-1-20180109-01

Lab Sample ID: 400-148359-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.74	J	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	0.26		0.25	0.13	mg/L	5		6020	Total Recoverable

Client Sample ID: GWC-5-20180110-01

Lab Sample ID: 400-148359-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.81		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	25		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	0.68		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.014		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Zinc	0.012	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Cobalt	0.0097		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: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5-20180110-01 (Continued)

Lab Sample ID: 400-148359-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0032	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.015		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.011		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00063		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00090		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-6-20180110-01

Lab Sample ID: 400-148359-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.95	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0073		0.0050	0.0032	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-7-20180110-01

Lab Sample ID: 400-148359-15

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
Barium	0.018		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	1.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0090		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.024		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-1-20180110-01

Lab Sample ID: 400-148359-17

No Detections.

Client Sample ID: FB-1-20180110-01

Lab Sample ID: 400-148359-18

No Detections.

Client Sample ID: FERB-2-20180110-01

Lab Sample ID: 400-148359-19

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-2-20180110-01 (Continued)

Lab Sample ID: 400-148359-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0011	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-2-20180110-01

Lab Sample ID: 400-148359-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.81		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	25		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	0.67		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Vanadium	0.014		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Zinc	0.011	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Cobalt	0.0097		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.015		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.011		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00062		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00090		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	130		25	17	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

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: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-148359-1	GWA-2A-20180108-01	Water	01/08/18 16:47	01/15/18 09:58
400-148359-2	GWA-1A-20180108-01	Water	01/08/18 17:02	01/15/18 09:58
400-148359-3	GWC-1-20180109-01	Water	01/09/18 09:36	01/15/18 09:58
400-148359-4	GWA-3A-20180109-01	Water	01/09/18 10:15	01/15/18 09:58
400-148359-5	GWC-2-20180109-01	Water	01/09/18 11:16	01/15/18 09:58
400-148359-6	GWA-4-20180109-01	Water	01/09/18 12:10	01/15/18 09:58
400-148359-7	GWA-3B-20180109-01	Water	01/09/18 12:15	01/15/18 09:58
400-148359-8	GWC-3-20180109-01	Water	01/09/18 13:21	01/15/18 09:58
400-148359-9	GWC-4A-20180109-01	Water	01/09/18 15:10	01/15/18 09:58
400-148359-10	GWA-5-20180109-01	Water	01/09/18 15:14	01/15/18 09:58
400-148359-11	GWC-4B-20180109-01	Water	01/09/18 16:35	01/15/18 09:58
400-148359-12	DUP-1-20180109-01	Water	01/09/18 00:00	01/15/18 09:58
400-148359-13	GWC-5-20180110-01	Water	01/10/18 09:16	01/15/18 09:58
400-148359-14	GWC-6-20180110-01	Water	01/10/18 10:15	01/15/18 09:58
400-148359-15	GWC-7-20180110-01	Water	01/10/18 13:16	01/15/18 09:58
400-148359-17	FERB-1-20180110-01	Water	01/10/18 11:15	01/15/18 09:58
400-148359-18	FB-1-20180110-01	Water	01/10/18 11:25	01/15/18 09:58
400-148359-19	FERB-2-20180110-01	Water	01/10/18 11:30	01/15/18 09:58
400-148359-20	DUP-2-20180110-01	Water	01/10/18 11:35	01/15/18 09:58

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A-20180108-01

Lab Sample ID: 400-148359-1

Date Collected: 01/08/18 16:47

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 17:03	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 17:03	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 17:03	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		01/16/18 09:24	01/16/18 17:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 17:56	5
Barium	0.038		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 17:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 17:56	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 17:56	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 17:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 17:56	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 17:56	5
Calcium	3.4		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 17:56	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 17:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 17:56	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 17:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 17:56	5
Lithium	0.010		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 17:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 17:56	5
Selenium	0.0013		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 17:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 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		01/16/18 10:28	01/22/18 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24	H	5.0	3.4	mg/L			01/19/18 18:42	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A-20180108-01

Lab Sample ID: 400-148359-2

Date Collected: 01/08/18 17:02

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 18:12	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 18:12	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 18:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 18:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 18:19	5
Barium	0.022		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 18:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:19	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 18:19	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 18:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:19	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 18:19	5
Calcium	1.7		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 18:19	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 18:19	5
Chromium	0.0038		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 18:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 18:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 18:19	5
Lithium	0.011		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 18:19	5
Molybdenum	0.0011	J	0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 18:19	5
Selenium	0.0019		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 18:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 18:19	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		01/16/18 10:28	01/22/18 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16	H	5.0	3.4	mg/L			01/19/18 18:42	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-1-20180109-01

Lab Sample ID: 400-148359-3

Date Collected: 01/09/18 09:36

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 18:34	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 18:34	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 18:34	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		01/16/18 09:24	01/16/18 18:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 18:23	5
Barium	0.016		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 18:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:23	5
Boron	0.025	J	0.050	0.021	mg/L		01/16/18 09:24	01/16/18 18:23	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 18:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:23	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 18:23	5
Calcium	0.16	J	0.25	0.13	mg/L		01/16/18 09:24	01/16/18 18:23	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 18:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 18:23	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 18:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 18:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 18:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 18:23	5
Selenium	0.00041	J	0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 18:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 18:23	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 13:05	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			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3A-20180109-01

Lab Sample ID: 400-148359-4

Date Collected: 01/09/18 10:15

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 18:57	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 18:57	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 18:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 18:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 18:28	5
Barium	0.050		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 18:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:28	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 18:28	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 18:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:28	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 18:28	5
Calcium	1.9		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 18:28	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 18:28	5
Chromium	0.0038		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 18:28	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 18:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 18:28	5
Lithium	0.0041	J	0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 18:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 18:28	5
Selenium	0.00039	J	0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 18:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 18:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 13:06	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			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2-20180109-01

Lab Sample ID: 400-148359-5

Date Collected: 01/09/18 11:16

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		1.0	0.89	mg/L			01/31/18 19:20	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 19:20	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 19:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 18:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 18:55	5
Barium	0.059		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 18:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:55	5
Boron	0.023	J	0.050	0.021	mg/L		01/16/18 09:24	01/16/18 18:55	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 18:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:55	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 18:55	5
Calcium	1.7		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 18:55	5
Zinc	0.0079	J	0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 18:55	5
Chromium	0.0030		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 18:55	5
Cobalt	0.00092	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 18:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 18:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 18:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 18:55	5
Selenium	0.00028	J	0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 18:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 18:55	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		01/16/18 10:28	01/22/18 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-4-20180109-01

Lab Sample ID: 400-148359-6

Date Collected: 01/09/18 12:10

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 19:43	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 19:43	1
Sulfate	3.0		1.0	0.70	mg/L			01/31/18 19:43	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		01/16/18 09:24	01/16/18 18:59	5
Arsenic	0.00086	J	0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 18:59	5
Barium	0.043		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 18:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:59	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 18:59	5
Copper	0.0025		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 18:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 18:59	5
Vanadium	0.0072		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 18:59	5
Calcium	1.0		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 18:59	5
Zinc	0.0072	J	0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 18:59	5
Chromium	0.0087		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 18:59	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 18:59	5
Lead	0.0023		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 18:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 18:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 18:59	5
Selenium	0.00054	J	0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 18:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 18:59	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		01/16/18 10:28	01/22/18 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B-20180109-01

Lab Sample ID: 400-148359-7

Date Collected: 01/09/18 12:15

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 20:06	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 20:06	1
Sulfate	9.8		1.0	0.70	mg/L			01/31/18 20:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 19:04	5
Arsenic	0.00060	J	0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:04	5
Barium	0.058		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:04	5
Boron	0.026	J	0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:04	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:04	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:04	5
Calcium	2.5		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:04	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:04	5
Cobalt	0.00070	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:04	5
Lead	0.00041	J	0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:04	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		01/16/18 10:28	01/22/18 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-3-20180109-01

Lab Sample ID: 400-148359-8

Date Collected: 01/09/18 13:21

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			01/31/18 21:37	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 21:37	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 21:37	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		01/16/18 09:24	01/16/18 19:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:08	5
Barium	0.038		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:08	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:08	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:08	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:08	5
Calcium	2.2		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:08	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:08	5
Chromium	0.0035		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:08	5
Cobalt	0.00053 J		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:08	5
Lithium	0.0095		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:08	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		01/16/18 10:28	01/22/18 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A-20180109-01

Lab Sample ID: 400-148359-9

Date Collected: 01/09/18 15:10

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.89	mg/L			01/31/18 22:00	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 22:00	1
Sulfate	0.79	J	1.0	0.70	mg/L			01/31/18 22:00	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		01/16/18 09:24	01/16/18 19:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:13	5
Barium	0.033		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:13	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:13	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:13	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:13	5
Calcium	0.38		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:13	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:13	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:13	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		01/16/18 10:28	01/22/18 13:27	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			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-5-20180109-01

Lab Sample ID: 400-148359-10

Date Collected: 01/09/18 15:14

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.9		1.0	0.89	mg/L			01/31/18 22:23	1
Fluoride	0.13	J	0.20	0.082	mg/L			01/31/18 22:23	1
Sulfate	25		1.0	0.70	mg/L			01/31/18 22:23	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		01/16/18 09:24	01/16/18 19:17	5
Arsenic	0.00064	J	0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:17	5
Barium	0.13		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:17	5
Boron	0.042	J	0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:17	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:17	5
Vanadium	0.0027		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:17	5
Calcium	4.1		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:17	5
Zinc	0.014	J	0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:17	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:17	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:17	5
Lead	0.00059	J	0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:17	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		01/16/18 10:28	01/22/18 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18		5.0	3.4	mg/L			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4B-20180109-01

Lab Sample ID: 400-148359-11

Date Collected: 01/09/18 16:35

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.89	mg/L			01/31/18 22:45	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 22:45	1
Sulfate	0.81	J	1.0	0.70	mg/L			01/31/18 22:45	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		01/16/18 09:24	01/16/18 19:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:22	5
Barium	0.023		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:22	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:22	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:22	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:22	5
Calcium	0.17	J	0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:22	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:22	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:22	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		01/16/18 10:28	01/22/18 13:30	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			01/16/18 17:11	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: DUP-1-20180109-01

Lab Sample ID: 400-148359-12

Date Collected: 01/09/18 00:00

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		1.0	0.89	mg/L			01/31/18 23:08	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 23:08	1
Sulfate	0.74	J	1.0	0.70	mg/L			01/31/18 23:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 19:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:26	5
Barium	0.023		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:26	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:26	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:26	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:26	5
Calcium	0.26		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:26	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:26	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:26	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:26	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 13:32	1

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			01/19/18 18:42	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5-20180110-01

Lab Sample ID: 400-148359-13

Date Collected: 01/10/18 09:16

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/18 11:42	1
Fluoride	0.81		0.20	0.082	mg/L			02/01/18 11:42	1
Sulfate	25		1.0	0.70	mg/L			02/01/18 11:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 19:31	5
Arsenic	0.0013		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:31	5
Barium	0.68		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:31	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:31	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:31	5
Vanadium	0.014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:31	5
Calcium	11		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:31	5
Zinc	0.012 J		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:31	5
Cobalt	0.0097		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:31	5
Lithium	0.0032 J		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:31	5
Molybdenum	0.015		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:31	5
Selenium	0.011		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:31	5
Thallium	0.00063		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00090		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	94		5.0	3.4	mg/L			01/17/18 19:26	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-6-20180110-01

Lab Sample ID: 400-148359-14

Date Collected: 01/10/18 10:15

Matrix: Water

Date Received: 01/15/18 09:58

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			01/31/18 23:54	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 23:54	1
Sulfate	0.95	J	1.0	0.70	mg/L			01/31/18 23:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 19:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 19:35	5
Barium	0.027		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 19:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:35	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 19:35	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 19:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 19:35	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 19:35	5
Calcium	1.0		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 19:35	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 19:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 19:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 19:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 19:35	5
Lithium	0.0073		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 19:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 19:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 19:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 19:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			01/17/18 19:26	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-7-20180110-01

Lab Sample ID: 400-148359-15

Date Collected: 01/10/18 13:16

Matrix: Water

Date Received: 01/15/18 09:58

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			02/01/18 00:17	1
Fluoride	<0.082		0.20	0.082	mg/L			02/01/18 00:17	1
Sulfate	<0.70		1.0	0.70	mg/L			02/01/18 00:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 20:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 20:02	5
Barium	0.018		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 20:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:02	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 20:02	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 20:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:02	5
Vanadium	0.0015 J		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 20:02	5
Calcium	1.2		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 20:02	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 20:02	5
Chromium	0.0090		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 20:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 20:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 20:02	5
Lithium	0.010		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 20:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 20:02	5
Selenium	0.024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 20:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 20:02	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		01/16/18 10:28	01/22/18 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	64		5.0	3.4	mg/L			01/17/18 19:26	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1-20180110-01

Lab Sample ID: 400-148359-17

Date Collected: 01/10/18 11:15

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/18 02:57	1
Fluoride	<0.082		0.20	0.082	mg/L			02/01/18 02:57	1
Sulfate	<0.70		1.0	0.70	mg/L			02/01/18 02:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 20:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 20:07	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 20:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:07	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 20:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:07	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 20:07	5
Calcium	<0.13		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 20:07	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 20:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 20:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 20:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 20:07	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 20:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 20:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 20:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 20:07	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/17/18 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		01/16/18 10:28	01/22/18 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/18 19:26	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FB-1-20180110-01

Lab Sample ID: 400-148359-18

Date Collected: 01/10/18 11:25

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/18 03:19	1
Fluoride	<0.082		0.20	0.082	mg/L			02/01/18 03:19	1
Sulfate	<0.70		1.0	0.70	mg/L			02/01/18 03:19	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		01/16/18 09:24	01/16/18 20:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 20:11	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 20:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:11	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 20:11	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 20:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:11	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 20:11	5
Calcium	<0.13		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 20:11	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 20:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 20:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 20:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 20:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 20:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 20:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 20:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 20:11	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		01/16/18 10:28	01/22/18 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/18 19:26	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-2-20180110-01

Lab Sample ID: 400-148359-19

Date Collected: 01/10/18 11:30

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/18 03:42	1
Fluoride	<0.082		0.20	0.082	mg/L			02/01/18 03:42	1
Sulfate	<0.70		1.0	0.70	mg/L			02/01/18 03:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 20:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 20:15	5
Barium	0.0011	J	0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 20:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:15	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 20:15	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 20:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:15	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 20:15	5
Calcium	<0.13		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 20:15	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 20:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 20:15	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 20:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 20:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 20:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 20:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 20:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 20:15	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/17/18 19:26	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: DUP-2-20180110-01

Lab Sample ID: 400-148359-20

Date Collected: 01/10/18 11:35

Matrix: Water

Date Received: 01/15/18 09:58

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/18 12:05	1
Fluoride	0.81		0.20	0.082	mg/L			02/01/18 12:05	1
Sulfate	25		1.0	0.70	mg/L			02/01/18 12:05	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		01/16/18 09:24	01/16/18 20:20	5
Arsenic	0.0013		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 20:20	5
Barium	0.67		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 20:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:20	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 20:20	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 20:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 20:20	5
Vanadium	0.014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 20:20	5
Calcium	11		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 20:20	5
Zinc	0.011	J	0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 20:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 20:20	5
Cobalt	0.0097		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 20:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 20:20	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 20:20	5
Molybdenum	0.015		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 20:20	5
Selenium	0.011		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 20:20	5
Thallium	0.00062		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 20:20	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00090		0.00020	0.000070	mg/L		01/16/18 10:28	01/22/18 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		25	17	mg/L			01/16/18 17:11	1

Definitions/Glossary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

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.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A-20180108-01

Date Collected: 01/08/18 16:47

Date Received: 01/15/18 09:58

Lab Sample ID: 400-148359-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 17:03	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 17:56	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 12:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383383	01/19/18 18:42	TET	TAL PEN

Client Sample ID: GWA-1A-20180108-01

Date Collected: 01/08/18 17:02

Date Received: 01/15/18 09:58

Lab Sample ID: 400-148359-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 18:12	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 18:19	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 12:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383383	01/19/18 18:42	TET	TAL PEN

Client Sample ID: GWC-1-20180109-01

Date Collected: 01/09/18 09:36

Date Received: 01/15/18 09:58

Lab Sample ID: 400-148359-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 18:34	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 18:23	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: GWA-3A-20180109-01

Date Collected: 01/09/18 10:15

Date Received: 01/15/18 09:58

Lab Sample ID: 400-148359-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 18:57	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 18:28	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2-20180109-01

Lab Sample ID: 400-148359-5

Date Collected: 01/09/18 11:16

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 19:20	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 18:55	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: GWA-4-20180109-01

Lab Sample ID: 400-148359-6

Date Collected: 01/09/18 12:10

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 19:43	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 18:59	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: GWA-3B-20180109-01

Lab Sample ID: 400-148359-7

Date Collected: 01/09/18 12:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 20:06	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:04	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: GWC-3-20180109-01

Lab Sample ID: 400-148359-8

Date Collected: 01/09/18 13:21

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 21:37	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:08	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A-20180109-01

Lab Sample ID: 400-148359-9

Date Collected: 01/09/18 15:10

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 22:00	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:13	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: GWA-5-20180109-01

Lab Sample ID: 400-148359-10

Date Collected: 01/09/18 15:14

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 22:23	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:17	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: GWC-4B-20180109-01

Lab Sample ID: 400-148359-11

Date Collected: 01/09/18 16:35

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 22:45	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:22	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 17:11	TET	TAL PEN

Client Sample ID: DUP-1-20180109-01

Lab Sample ID: 400-148359-12

Date Collected: 01/09/18 00:00

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 23:08	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:26	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383383	01/19/18 18:42	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5-20180110-01

Lab Sample ID: 400-148359-13

Date Collected: 01/10/18 09:16

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384847	02/01/18 11:42	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:31	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383145	01/17/18 19:26	TET	TAL PEN

Client Sample ID: GWC-6-20180110-01

Lab Sample ID: 400-148359-14

Date Collected: 01/10/18 10:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	01/31/18 23:54	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 19:35	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383145	01/17/18 19:26	TET	TAL PEN

Client Sample ID: GWC-7-20180110-01

Lab Sample ID: 400-148359-15

Date Collected: 01/10/18 13:16

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384708	02/01/18 00:17	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 20:02	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383145	01/17/18 19:26	TET	TAL PEN

Client Sample ID: FERB-1-20180110-01

Lab Sample ID: 400-148359-17

Date Collected: 01/10/18 11:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384847	02/01/18 02:57	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 20:07	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	383161	01/17/18 18:03	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1-20180110-01

Lab Sample ID: 400-148359-17

Date Collected: 01/10/18 11:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	383565	01/22/18 13:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383145	01/17/18 19:26	TET	TAL PEN

Client Sample ID: FB-1-20180110-01

Lab Sample ID: 400-148359-18

Date Collected: 01/10/18 11:25

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384847	02/01/18 03:19	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 20:11	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 14:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383145	01/17/18 19:26	TET	TAL PEN

Client Sample ID: FERB-2-20180110-01

Lab Sample ID: 400-148359-19

Date Collected: 01/10/18 11:30

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384847	02/01/18 03:42	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 20:15	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 14:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	383145	01/17/18 19:26	TET	TAL PEN

Client Sample ID: DUP-2-20180110-01

Lab Sample ID: 400-148359-20

Date Collected: 01/10/18 11:35

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	384847	02/01/18 12:05	JAW	TAL PEN
Total Recoverable	Prep	3005A			382899	01/16/18 09:24	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	383077	01/16/18 20:20	DRE	TAL PEN
Total/NA	Prep	7470A			382907	01/16/18 10:28	JAP	TAL PEN
Total/NA	Analysis	7470A		1	383565	01/22/18 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	382993	01/16/18 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: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

HPLC/IC

Analysis Batch: 384708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total/NA	Water	300.0	
400-148359-2	GWA-1A-20180108-01	Total/NA	Water	300.0	
400-148359-3	GWC-1-20180109-01	Total/NA	Water	300.0	
400-148359-4	GWA-3A-20180109-01	Total/NA	Water	300.0	
400-148359-5	GWC-2-20180109-01	Total/NA	Water	300.0	
400-148359-6	GWA-4-20180109-01	Total/NA	Water	300.0	
400-148359-7	GWA-3B-20180109-01	Total/NA	Water	300.0	
400-148359-8	GWC-3-20180109-01	Total/NA	Water	300.0	
400-148359-9	GWC-4A-20180109-01	Total/NA	Water	300.0	
400-148359-10	GWA-5-20180109-01	Total/NA	Water	300.0	
400-148359-11	GWC-4B-20180109-01	Total/NA	Water	300.0	
400-148359-12	DUP-1-20180109-01	Total/NA	Water	300.0	
400-148359-14	GWC-6-20180110-01	Total/NA	Water	300.0	
400-148359-15	GWC-7-20180110-01	Total/NA	Water	300.0	
MB 400-384708/9	Method Blank	Total/NA	Water	300.0	
LCS 400-384708/10	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-384708/11	Lab Control Sample Dup	Total/NA	Water	300.0	
400-148359-1 MS	GWA-2A-20180108-01	Total/NA	Water	300.0	
400-148359-1 MSD	GWA-2A-20180108-01	Total/NA	Water	300.0	
400-148359-7 MS	GWA-3B-20180109-01	Total/NA	Water	300.0	

Analysis Batch: 384847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-13	GWC-5-20180110-01	Total/NA	Water	300.0	
400-148359-17	FERB-1-20180110-01	Total/NA	Water	300.0	
400-148359-18	FB-1-20180110-01	Total/NA	Water	300.0	
400-148359-19	FERB-2-20180110-01	Total/NA	Water	300.0	
400-148359-20	DUP-2-20180110-01	Total/NA	Water	300.0	
MB 400-384847/42	Method Blank	Total/NA	Water	300.0	
LCS 400-384847/43	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-384847/44	Lab Control Sample Dup	Total/NA	Water	300.0	
400-148640-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-148640-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 382899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total Recoverable	Water	3005A	
400-148359-2	GWA-1A-20180108-01	Total Recoverable	Water	3005A	
400-148359-3	GWC-1-20180109-01	Total Recoverable	Water	3005A	
400-148359-4	GWA-3A-20180109-01	Total Recoverable	Water	3005A	
400-148359-5	GWC-2-20180109-01	Total Recoverable	Water	3005A	
400-148359-6	GWA-4-20180109-01	Total Recoverable	Water	3005A	
400-148359-7	GWA-3B-20180109-01	Total Recoverable	Water	3005A	
400-148359-8	GWC-3-20180109-01	Total Recoverable	Water	3005A	
400-148359-9	GWC-4A-20180109-01	Total Recoverable	Water	3005A	
400-148359-10	GWA-5-20180109-01	Total Recoverable	Water	3005A	
400-148359-11	GWC-4B-20180109-01	Total Recoverable	Water	3005A	
400-148359-12	DUP-1-20180109-01	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Metals (Continued)

Prep Batch: 382899 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-13	GWC-5-20180110-01	Total Recoverable	Water	3005A	
400-148359-14	GWC-6-20180110-01	Total Recoverable	Water	3005A	
400-148359-15	GWC-7-20180110-01	Total Recoverable	Water	3005A	
400-148359-17	FERB-1-20180110-01	Total Recoverable	Water	3005A	
400-148359-17 - RA	FERB-1-20180110-01	Total Recoverable	Water	3005A	
400-148359-18	FB-1-20180110-01	Total Recoverable	Water	3005A	
400-148359-19	FERB-2-20180110-01	Total Recoverable	Water	3005A	
400-148359-20	DUP-2-20180110-01	Total Recoverable	Water	3005A	
MB 400-382899/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-382899/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-148359-1 MS	GWA-2A-20180108-01	Total Recoverable	Water	3005A	
400-148359-1 MSD	GWA-2A-20180108-01	Total Recoverable	Water	3005A	

Prep Batch: 382907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total/NA	Water	7470A	
400-148359-2	GWA-1A-20180108-01	Total/NA	Water	7470A	
400-148359-3	GWC-1-20180109-01	Total/NA	Water	7470A	
400-148359-4	GWA-3A-20180109-01	Total/NA	Water	7470A	
400-148359-5	GWC-2-20180109-01	Total/NA	Water	7470A	
400-148359-6	GWA-4-20180109-01	Total/NA	Water	7470A	
400-148359-7	GWA-3B-20180109-01	Total/NA	Water	7470A	
400-148359-8	GWC-3-20180109-01	Total/NA	Water	7470A	
400-148359-9	GWC-4A-20180109-01	Total/NA	Water	7470A	
400-148359-10	GWA-5-20180109-01	Total/NA	Water	7470A	
400-148359-11	GWC-4B-20180109-01	Total/NA	Water	7470A	
400-148359-12	DUP-1-20180109-01	Total/NA	Water	7470A	
400-148359-13	GWC-5-20180110-01	Total/NA	Water	7470A	
400-148359-14	GWC-6-20180110-01	Total/NA	Water	7470A	
400-148359-15	GWC-7-20180110-01	Total/NA	Water	7470A	
400-148359-17	FERB-1-20180110-01	Total/NA	Water	7470A	
400-148359-18	FB-1-20180110-01	Total/NA	Water	7470A	
400-148359-19	FERB-2-20180110-01	Total/NA	Water	7470A	
400-148359-20	DUP-2-20180110-01	Total/NA	Water	7470A	
MB 400-382907/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-382907/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-148359-B-2-C MS	400-148359-B-2-C MS	Total/NA	Water	7470A	
400-148359-B-2-D MSD	400-148359-B-2-D MSD	Total/NA	Water	7470A	

Analysis Batch: 383077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total Recoverable	Water	6020	382899
400-148359-2	GWA-1A-20180108-01	Total Recoverable	Water	6020	382899
400-148359-3	GWC-1-20180109-01	Total Recoverable	Water	6020	382899
400-148359-4	GWA-3A-20180109-01	Total Recoverable	Water	6020	382899
400-148359-5	GWC-2-20180109-01	Total Recoverable	Water	6020	382899
400-148359-6	GWA-4-20180109-01	Total Recoverable	Water	6020	382899
400-148359-7	GWA-3B-20180109-01	Total Recoverable	Water	6020	382899
400-148359-8	GWC-3-20180109-01	Total Recoverable	Water	6020	382899
400-148359-9	GWC-4A-20180109-01	Total Recoverable	Water	6020	382899
400-148359-10	GWA-5-20180109-01	Total Recoverable	Water	6020	382899

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Metals (Continued)

Analysis Batch: 383077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-11	GWC-4B-20180109-01	Total Recoverable	Water	6020	382899
400-148359-12	DUP-1-20180109-01	Total Recoverable	Water	6020	382899
400-148359-13	GWC-5-20180110-01	Total Recoverable	Water	6020	382899
400-148359-14	GWC-6-20180110-01	Total Recoverable	Water	6020	382899
400-148359-15	GWC-7-20180110-01	Total Recoverable	Water	6020	382899
400-148359-17	FERB-1-20180110-01	Total Recoverable	Water	6020	382899
400-148359-18	FB-1-20180110-01	Total Recoverable	Water	6020	382899
400-148359-19	FERB-2-20180110-01	Total Recoverable	Water	6020	382899
400-148359-20	DUP-2-20180110-01	Total Recoverable	Water	6020	382899
MB 400-382899/1-A ^5	Method Blank	Total Recoverable	Water	6020	382899
LCS 400-382899/2-A	Lab Control Sample	Total Recoverable	Water	6020	382899
400-148359-1 MS	GWA-2A-20180108-01	Total Recoverable	Water	6020	382899
400-148359-1 MSD	GWA-2A-20180108-01	Total Recoverable	Water	6020	382899

Analysis Batch: 383161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-17 - RA	FERB-1-20180110-01	Total Recoverable	Water	6020	382899

Analysis Batch: 383565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total/NA	Water	7470A	382907
400-148359-2	GWA-1A-20180108-01	Total/NA	Water	7470A	382907
400-148359-3	GWC-1-20180109-01	Total/NA	Water	7470A	382907
400-148359-4	GWA-3A-20180109-01	Total/NA	Water	7470A	382907
400-148359-5	GWC-2-20180109-01	Total/NA	Water	7470A	382907
400-148359-6	GWA-4-20180109-01	Total/NA	Water	7470A	382907
400-148359-7	GWA-3B-20180109-01	Total/NA	Water	7470A	382907
400-148359-8	GWC-3-20180109-01	Total/NA	Water	7470A	382907
400-148359-9	GWC-4A-20180109-01	Total/NA	Water	7470A	382907
400-148359-10	GWA-5-20180109-01	Total/NA	Water	7470A	382907
400-148359-11	GWC-4B-20180109-01	Total/NA	Water	7470A	382907
400-148359-12	DUP-1-20180109-01	Total/NA	Water	7470A	382907
400-148359-13	GWC-5-20180110-01	Total/NA	Water	7470A	382907
400-148359-14	GWC-6-20180110-01	Total/NA	Water	7470A	382907
400-148359-15	GWC-7-20180110-01	Total/NA	Water	7470A	382907
400-148359-17	FERB-1-20180110-01	Total/NA	Water	7470A	382907
400-148359-18	FB-1-20180110-01	Total/NA	Water	7470A	382907
400-148359-19	FERB-2-20180110-01	Total/NA	Water	7470A	382907
400-148359-20	DUP-2-20180110-01	Total/NA	Water	7470A	382907
MB 400-382907/14-A	Method Blank	Total/NA	Water	7470A	382907
LCS 400-382907/15-A	Lab Control Sample	Total/NA	Water	7470A	382907
400-148359-B-2-C MS	400-148359-B-2-C MS	Total/NA	Water	7470A	382907
400-148359-B-2-D MSD	400-148359-B-2-D MSD	Total/NA	Water	7470A	382907

General Chemistry

Analysis Batch: 382993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-3	GWC-1-20180109-01	Total/NA	Water	SM 2540C	
400-148359-4	GWA-3A-20180109-01	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

General Chemistry (Continued)

Analysis Batch: 382993 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-5	GWC-2-20180109-01	Total/NA	Water	SM 2540C	
400-148359-6	GWA-4-20180109-01	Total/NA	Water	SM 2540C	
400-148359-7	GWA-3B-20180109-01	Total/NA	Water	SM 2540C	
400-148359-8	GWC-3-20180109-01	Total/NA	Water	SM 2540C	
400-148359-9	GWC-4A-20180109-01	Total/NA	Water	SM 2540C	
400-148359-10	GWA-5-20180109-01	Total/NA	Water	SM 2540C	
400-148359-11	GWC-4B-20180109-01	Total/NA	Water	SM 2540C	
400-148359-20	DUP-2-20180110-01	Total/NA	Water	SM 2540C	
MB 400-382993/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-382993/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-148359-3 DU	GWC-1-20180109-01	Total/NA	Water	SM 2540C	

Analysis Batch: 383145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-13	GWC-5-20180110-01	Total/NA	Water	SM 2540C	
400-148359-14	GWC-6-20180110-01	Total/NA	Water	SM 2540C	
400-148359-15	GWC-7-20180110-01	Total/NA	Water	SM 2540C	
400-148359-17	FERB-1-20180110-01	Total/NA	Water	SM 2540C	
400-148359-18	FB-1-20180110-01	Total/NA	Water	SM 2540C	
400-148359-19	FERB-2-20180110-01	Total/NA	Water	SM 2540C	
MB 400-383145/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-383145/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-148231-D-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 383383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total/NA	Water	SM 2540C	
400-148359-2	GWA-1A-20180108-01	Total/NA	Water	SM 2540C	
400-148359-12	DUP-1-20180109-01	Total/NA	Water	SM 2540C	
MB 400-383383/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-383383/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-148359-1 DU	GWA-2A-20180108-01	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-384708/9
Matrix: Water
Analysis Batch: 384708

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			01/31/18 13:38	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/18 13:38	1
Sulfate	<0.70		1.0	0.70	mg/L			01/31/18 13:38	1

Lab Sample ID: LCS 400-384708/10
Matrix: Water
Analysis Batch: 384708

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	9.33		mg/L		93	90 - 110
Fluoride	10.0	9.92		mg/L		99	90 - 110
Sulfate	10.0	9.81		mg/L		98	90 - 110

Lab Sample ID: LCSD 400-384708/11
Matrix: Water
Analysis Batch: 384708

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	9.32		mg/L		93	90 - 110	0	15
Fluoride	10.0	9.90		mg/L		99	90 - 110	0	15
Sulfate	10.0	9.77		mg/L		98	90 - 110	0	15

Lab Sample ID: 400-148359-1 MS
Matrix: Water
Analysis Batch: 384708

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		10.0	21.8		mg/L		94	80 - 120
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120
Sulfate	<0.70		10.0	10.4		mg/L		104	80 - 120

Lab Sample ID: 400-148359-1 MSD
Matrix: Water
Analysis Batch: 384708

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		10.0	21.8		mg/L		95	80 - 120	0	20
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120	0	20
Sulfate	<0.70		10.0	10.5		mg/L		105	80 - 120	0	20

Lab Sample ID: 400-148359-7 MS
Matrix: Water
Analysis Batch: 384708

Client Sample ID: GWA-3B-20180109-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.9		10.0	17.3		mg/L		94	80 - 120
Fluoride	<0.082		10.0	10.2		mg/L		102	80 - 120
Sulfate	9.8		10.0	20.0		mg/L		102	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 400-384847/42
Matrix: Water
Analysis Batch: 384847

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/18 01:48	1
Fluoride	<0.082		0.20	0.082	mg/L			02/01/18 01:48	1
Sulfate	<0.70		1.0	0.70	mg/L			02/01/18 01:48	1

Lab Sample ID: LCS 400-384847/43
Matrix: Water
Analysis Batch: 384847

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	9.37		mg/L		94	90 - 110
Fluoride	10.0	9.95		mg/L		99	90 - 110
Sulfate	10.0	9.88		mg/L		99	90 - 110

Lab Sample ID: LCSD 400-384847/44
Matrix: Water
Analysis Batch: 384847

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	9.37		mg/L		94	90 - 110	0	15
Fluoride	10.0	9.92		mg/L		99	90 - 110	0	15
Sulfate	10.0	9.79		mg/L		98	90 - 110	1	15

Lab Sample ID: 400-148640-A-1 MS
Matrix: Water
Analysis Batch: 384847

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	3900		2000	6260		mg/L		119	80 - 120
Fluoride	<16		2000	1990		mg/L		99	80 - 120
Sulfate	490		2000	2600		mg/L		105	80 - 120

Lab Sample ID: 400-148640-A-1 MSD
Matrix: Water
Analysis Batch: 384847

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	3900		2000	6260		mg/L		119	80 - 120	0	20
Fluoride	<16		2000	1980		mg/L		99	80 - 120	0	20
Sulfate	490		2000	2590		mg/L		105	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-382899/1-A ^5
Matrix: Water
Analysis Batch: 383077

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/16/18 09:24	01/16/18 17:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/16/18 09:24	01/16/18 17:43	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: MB 400-382899/1-A ^5
Matrix: Water
Analysis Batch: 383077

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		01/16/18 09:24	01/16/18 17:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 17:43	5
Boron	<0.021		0.050	0.021	mg/L		01/16/18 09:24	01/16/18 17:43	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/16/18 09:24	01/16/18 17:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/16/18 09:24	01/16/18 17:43	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/16/18 09:24	01/16/18 17:43	5
Calcium	<0.13		0.25	0.13	mg/L		01/16/18 09:24	01/16/18 17:43	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/16/18 09:24	01/16/18 17:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/16/18 09:24	01/16/18 17:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/16/18 09:24	01/16/18 17:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/16/18 09:24	01/16/18 17:43	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/16/18 09:24	01/16/18 17:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/16/18 09:24	01/16/18 17:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/16/18 09:24	01/16/18 17:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/16/18 09:24	01/16/18 17:43	5

Lab Sample ID: LCS 400-382899/2-A
Matrix: Water
Analysis Batch: 383077

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0537		mg/L		107	80 - 120
Arsenic	0.0500	0.0512		mg/L		102	80 - 120
Barium	0.0500	0.0491		mg/L		98	80 - 120
Beryllium	0.0500	0.0514		mg/L		103	80 - 120
Boron	0.100	0.101		mg/L		101	80 - 120
Copper	0.0500	0.0514		mg/L		103	80 - 120
Cadmium	0.0500	0.0517		mg/L		103	80 - 120
Vanadium	0.0500	0.0504		mg/L		101	80 - 120
Calcium	5.00	5.32		mg/L		106	80 - 120
Zinc	0.0500	0.0508		mg/L		102	80 - 120
Chromium	0.0500	0.0505		mg/L		101	80 - 120
Cobalt	0.0500	0.0514		mg/L		103	80 - 120
Lead	0.0500	0.0501		mg/L		100	80 - 120
Lithium	0.0500	0.0536		mg/L		107	80 - 120
Molybdenum	0.0500	0.0523		mg/L		105	80 - 120
Selenium	0.0500	0.0506		mg/L		101	80 - 120
Thallium	0.0100	0.0100		mg/L		100	80 - 120

Lab Sample ID: 400-148359-1 MS
Matrix: Water
Analysis Batch: 383077

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0547		mg/L		109	75 - 125
Antimony	<0.0010		0.0500	0.0547		mg/L		109	75 - 125
Arsenic	<0.00046		0.0500	0.0520		mg/L		104	75 - 125
Arsenic	<0.00046		0.0500	0.0520		mg/L		104	75 - 125
Barium	0.038		0.0500	0.0874		mg/L		99	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: 400-148359-1 MS
Matrix: Water
Analysis Batch: 383077

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.038		0.0500	0.0874		mg/L		99	75 - 125
Beryllium	<0.00034		0.0500	0.0518		mg/L		104	75 - 125
Beryllium	<0.00034		0.0500	0.0518		mg/L		104	75 - 125
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125
Copper	<0.0021		0.0500	0.0528		mg/L		106	75 - 125
Copper	<0.0021		0.0500	0.0528		mg/L		106	75 - 125
Cadmium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125
Cadmium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125
Vanadium	<0.0014		0.0500	0.0512		mg/L		102	75 - 125
Vanadium	<0.0014		0.0500	0.0512		mg/L		102	75 - 125
Calcium	3.4		5.00	8.81		mg/L		108	75 - 125
Calcium	3.4		5.00	8.81		mg/L		108	75 - 125
Zinc	<0.0065		0.0500	0.0530		mg/L		106	75 - 125
Zinc	<0.0065		0.0500	0.0530		mg/L		106	75 - 125
Chromium	<0.0011		0.0500	0.0521		mg/L		104	75 - 125
Chromium	<0.0011		0.0500	0.0521		mg/L		104	75 - 125
Cobalt	0.00044	J	0.0500	0.0529		mg/L		105	75 - 125
Cobalt	0.00044	J	0.0500	0.0529		mg/L		105	75 - 125
Lead	<0.00035		0.0500	0.0500		mg/L		100	75 - 125
Lead	<0.00035		0.0500	0.0500		mg/L		100	75 - 125
Lithium	0.010		0.0500	0.0642		mg/L		108	75 - 125
Lithium	0.010		0.0500	0.0642		mg/L		108	75 - 125
Molybdenum	<0.00085		0.0500	0.0531		mg/L		106	75 - 125
Molybdenum	<0.00085		0.0500	0.0531		mg/L		106	75 - 125
Selenium	0.0013		0.0500	0.0542		mg/L		106	75 - 125
Selenium	0.0013		0.0500	0.0542		mg/L		106	75 - 125
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125

Lab Sample ID: 400-148359-1 MSD
Matrix: Water
Analysis Batch: 383077

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0536		mg/L		107	75 - 125	2	20
Antimony	<0.0010		0.0500	0.0536		mg/L		107	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0522		mg/L		104	75 - 125	0	20
Arsenic	<0.00046		0.0500	0.0522		mg/L		104	75 - 125	0	20
Barium	0.038		0.0500	0.0867		mg/L		97	75 - 125	1	20
Barium	0.038		0.0500	0.0867		mg/L		97	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	0	20
Boron	<0.021		0.100	0.115		mg/L		115	75 - 125	2	20
Boron	<0.021		0.100	0.115		mg/L		115	75 - 125	2	20
Copper	<0.0021		0.0500	0.0529		mg/L		106	75 - 125	0	20
Copper	<0.0021		0.0500	0.0529		mg/L		106	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	2	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
 SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: 400-148359-1 MSD
Matrix: Water
Analysis Batch: 383077

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total Recoverable
Prep Batch: 382899

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	2	20
Vanadium	<0.0014		0.0500	0.0513		mg/L		103	75 - 125	0	20
Vanadium	<0.0014		0.0500	0.0513		mg/L		103	75 - 125	0	20
Calcium	3.4		5.00	8.73		mg/L		106	75 - 125	1	20
Calcium	3.4		5.00	8.73		mg/L		106	75 - 125	1	20
Zinc	<0.0065		0.0500	0.0528		mg/L		106	75 - 125	0	20
Zinc	<0.0065		0.0500	0.0528		mg/L		106	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0520		mg/L		104	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0520		mg/L		104	75 - 125	0	20
Cobalt	0.00044	J	0.0500	0.0530		mg/L		105	75 - 125	0	20
Cobalt	0.00044	J	0.0500	0.0530		mg/L		105	75 - 125	0	20
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125	1	20
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125	1	20
Lithium	0.010		0.0500	0.0654		mg/L		110	75 - 125	2	20
Lithium	0.010		0.0500	0.0654		mg/L		110	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0534		mg/L		107	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0534		mg/L		107	75 - 125	0	20
Selenium	0.0013		0.0500	0.0533		mg/L		104	75 - 125	2	20
Selenium	0.0013		0.0500	0.0533		mg/L		104	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	1	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-382907/14-A
Matrix: Water
Analysis Batch: 383565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382907

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/16/18 09:59	01/22/18 12:53	1

Lab Sample ID: LCS 400-382907/15-A
Matrix: Water
Analysis Batch: 383565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000988		mg/L		98	80 - 120

Lab Sample ID: 400-148359-B-2-C MS
Matrix: Water
Analysis Batch: 383565

Client Sample ID: 400-148359-B-2-C MS
Prep Type: Total/NA
Prep Batch: 382907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0000190		0.00201	0.00190		mg/L		94	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
SDG: McIntosh Ash Disposal Area 3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-148359-B-2-D MSD
Matrix: Water
Analysis Batch: 383565

Client Sample ID: 400-148359-B-2-D MSD
Prep Type: Total/NA
Prep Batch: 382907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0000190		0.00201	0.00188		mg/L		93	80 - 120	1	20

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

Lab Sample ID: MB 400-382993/1
Matrix: Water
Analysis Batch: 382993

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			01/16/18 17:11	1

Lab Sample ID: LCS 400-382993/2
Matrix: Water
Analysis Batch: 382993

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: 400-148359-3 DU
Matrix: Water
Analysis Batch: 382993

Client Sample ID: GWC-1-20180109-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	4.0	J	4.00	J	mg/L		0	5

Lab Sample ID: MB 400-383145/1
Matrix: Water
Analysis Batch: 383145

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			01/17/18 19:26	1

Lab Sample ID: LCS 400-383145/2
Matrix: Water
Analysis Batch: 383145

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	244		mg/L		83	78 - 122

Lab Sample ID: 400-148231-D-2 DU
Matrix: Water
Analysis Batch: 383145

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	92		90.0		mg/L		2	5

QC Sample Results

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

TestAmerica Job ID: 400-148359-1
 SDG: McIntosh Ash Disposal Area 3

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

Lab Sample ID: MB 400-383383/1
Matrix: Water
Analysis Batch: 383383

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			01/19/18 18:42	1

Lab Sample ID: LCS 400-383383/2
Matrix: Water
Analysis Batch: 383383

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: 400-148359-1 DU
Matrix: Water
Analysis Batch: 383383

Client Sample ID: GWA-2A-20180108-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	24	H	24.0		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
 THE LEADER IN ENVIRONMENTAL TESTING

Sampler: Markovous Thomas, Aubrey Ellis, Hannah Beough
 Lab PM: Whitmire, Cheyenne R.
 Client Information
 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 - LF3
 Site: Phase II CCR & State Permit

Due Date Requested:
 TAT Requested (days):
 FO #:
 WO #:
 Project #:
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)		Metals - (Part 257 Appendix III & Appendix IV) EPA 6020		Metals State Permit - EPA (6020) Ba, Be, Cd, Cr, Cu, Co, Ni, Pb, V, Zn		Total Number of Containers	Special Instructions/Note:
					Perform MS/MSD (Yes or No)	Preservation Code:	I	D	D	D		
GWA-2A-20180108-01	1/8/18	1647	G	W	N	N	X	X	X	X	3	
GWA-1A-20180108-01	1/8/18	1702	G	W	N	N	X	X	X	X	3	
GWC-1-20180109-01	1/9/18	0936	G	W	N	N	X	X	X	X	3	
GWA-3A-20180109-01	1/9/18	1015	G	W	N	N	X	X	X	X	3	
GWC-2-20180109-01	1/9/18	1116	G	W	N	N	X	X	X	X	3	
GWA-4-20180109-01	1/9/18	1210	G	W	N	N	X	X	X	X	3	
GWA-3B-20180109-01	1/9/18	1215	G	W	N	N	X	X	X	X	3	
GWC-3-20180109-01	1/9/18	1321	G	W	N	N	X	X	X	X	3	EXTRA RAD BOTTLE
GWC-4A-20180109-01	1/9/18	1510	G	W	N	N	X	X	X	X	3	
GWA-5-20180109-01	1/9/18	1514	G	W	N	N	X	X	X	X	3	
GWC-4B-20180109-01	1/9/18	1635	G	W	N	N	X	X	X	X	3	
DUP-1-20180109-01	1/9/18	-	G	W	N	N	X	X	X	X	3	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 1-11-18 17:42 Company: EPA
 Relinquished by: _____ Date/Time: 1/12/18 1800 Company: TA-LEN
 Relinquished by: _____ Date/Time: 1/15/18 0928 Company: TA-LEN
 Custody Seal No.: (F+Q-4) 1.6/10.510.511-710.8/14/1.0/1.4
 (1518) 1.2/0.1/0.1/1.3/0.4/1.0/0.6/1.0



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-148359-1
SDG Number: McIntosh Ash Disposal Area 3

Login Number: 148359

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	1.2°C, 0.1°C, 0.1°C, 1.3°C, 0.4°C, 1.0°C, 0.6°C, 1.0°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.	False	FB-2 on COC should have been DUP-2.
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: 400-148359-1
 SDG: McIntosh Ash Disposal Area 3

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	01-12-19
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	10-31-18
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	12-31-18
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	01-31-19
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

* 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: 400-148359-2

TestAmerica SDG: McIntosh Ash Disposal Area 3

Client Project/Site: CCR - Plant McIntosh

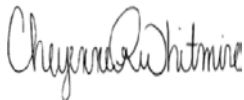
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/16/2018 3:08:25 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	25
Chronicle	26
QC Association	31
QC Sample Results	32
Chain of Custody	34
Receipt Checklists	36
Certification Summary	38

Case Narrative

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Job ID: 400-148359-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-148359-2

RAD

Method(s) 9320: Radium-228 Prep Batch 160-347209: The batch precision (RPD/RER) is outside of the acceptance limits of 40%/1 (92%/1.40). The batch was re-prepared and re-analyzed (160-348684) with a similar outcome indicating the sample and sample duplicate are non-homogenous with matrix interference. 400-148359-8/400-148359-8 DU has a strong sulfur-like odor indicating undissolved solids. The results are reported with this narrative. GWA-2A-20180108-01 (400-148359-1), GWA-1A-20180108-01 (400-148359-2), GWC-1-20180109-01 (400-148359-3), GWA-3A-20180109-01 (400-148359-4), GWC-2-20180109-01 (400-148359-5), GWA-4-20180109-01 (400-148359-6), GWA-3B-20180109-01 (400-148359-7), GWC-3-20180109-01 (400-148359-8), GWC-3-20180109-01 (400-148359-8[DU]), GWC-4A-20180109-01 (400-148359-9), GWA-5-20180109-01 (400-148359-10), GWC-4B-20180109-01 (400-148359-11), DUP-1-20180109-01 (400-148359-12), GWC-5-20180110-01 (400-148359-13), GWC-7-20180110-01 (400-148359-15), GWC-6-20180111-01 (400-148359-16), FERB-1-20180110-01 (400-148359-17), FB-1-20180110-01 (400-148359-18), FERB-2-20180110-01 (400-148359-19), DUP-2-20180110-01 (400-148359-20), (LCS 160-347209/2-A) and (MB 160-347209/1-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-347209. Samples are a light yellow color: GWC-5-20180110-01 (400-148359-13) and DUP-2-20180110-01 (400-148359-20).

Method(s) PrecSep_0: Radium 228 Prep Batch 160-348684. Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. GWA-2A-20180108-01 (400-148359-1), GWA-1A-20180108-01 (400-148359-2), GWC-1-20180109-01 (400-148359-3), GWA-3A-20180109-01 (400-148359-4), GWC-2-20180109-01 (400-148359-5), GWA-4-20180109-01 (400-148359-6), GWA-3B-20180109-01 (400-148359-7), GWC-3-20180109-01 (400-148359-8), GWC-3-20180109-01 (400-148359-8[DU]), GWC-4A-20180109-01 (400-148359-9), GWA-5-20180109-01 (400-148359-10), GWC-4B-20180109-01 (400-148359-11), DUP-1-20180109-01 (400-148359-12), GWC-5-20180110-01 (400-148359-13), GWC-7-20180110-01 (400-148359-15), GWC-6-20180111-01 (400-148359-16), FERB-1-20180110-01 (400-148359-17), FB-1-20180110-01 (400-148359-18), FERB-2-20180110-01 (400-148359-19) and DUP-2-20180110-01 (400-148359-20)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-348684. Sample aliquots reduced due to limited volume because of reanalysis. GWA-2A-20180108-01 (400-148359-1), GWA-1A-20180108-01 (400-148359-2), GWC-1-20180109-01 (400-148359-3), GWA-3A-20180109-01 (400-148359-4), GWC-2-20180109-01 (400-148359-5), GWA-4-20180109-01 (400-148359-6), GWA-3B-20180109-01 (400-148359-7), GWC-3-20180109-01 (400-148359-8), GWC-3-20180109-01 (400-148359-8[DU]), GWC-4A-20180109-01 (400-148359-9), GWA-5-20180109-01 (400-148359-10), GWC-4B-20180109-01 (400-148359-11), DUP-1-20180109-01 (400-148359-12), GWC-5-20180110-01 (400-148359-13), GWC-7-20180110-01 (400-148359-15), GWC-6-20180111-01 (400-148359-16), FERB-1-20180110-01 (400-148359-17), FB-1-20180110-01 (400-148359-18), FERB-2-20180110-01 (400-148359-19) and DUP-2-20180110-01 (400-148359-20)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-348684. Samples are a light yellow color: GWC-5-20180110-01 (400-148359-13) and DUP-2-20180110-01 (400-148359-20).

Method(s) PrecSep_0: Radium-228 Prep Batch 160-348684: This batch is a re-prepared batch (original batch 347209) due to RPD/RER failure. The re-prepared batch demonstrated the same issue indicating the sample and sample duplicate is non-homogenous and has matrix issues. The original batch will be reported with a narrative. GWA-2A-20180108-01 (400-148359-1), GWA-1A-20180108-01 (400-148359-2), GWC-1-20180109-01 (400-148359-3), GWA-3A-20180109-01 (400-148359-4), GWC-2-20180109-01 (400-148359-5), GWA-4-20180109-01 (400-148359-6), GWA-3B-20180109-01 (400-148359-7), GWC-3-20180109-01 (400-148359-8), GWC-3-20180109-01 (400-148359-8[DU]), GWC-4A-20180109-01 (400-148359-9), GWA-5-20180109-01 (400-148359-10), GWC-4B-20180109-01 (400-148359-11), DUP-1-20180109-01 (400-148359-12), GWC-5-20180110-01 (400-148359-13), GWC-7-20180110-01 (400-148359-15), GWC-6-20180111-01 (400-148359-16), FERB-1-20180110-01 (400-148359-17), FB-1-20180110-01 (400-148359-18), FERB-2-20180110-01 (400-148359-19) and DUP-2-20180110-01 (400-148359-20)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-347181. Samples are a light yellow in color: GWC-5-20180110-01 (400-148359-13) and DUP-2-20180110-01 (400-148359-20).

Method Summary

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

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

Protocol References:

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

Laboratory References:

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



Sample Summary

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-148359-1	GWA-2A-20180108-01	Water	01/08/18 16:47	01/15/18 09:58
400-148359-2	GWA-1A-20180108-01	Water	01/08/18 17:02	01/15/18 09:58
400-148359-3	GWC-1-20180109-01	Water	01/09/18 09:36	01/15/18 09:58
400-148359-4	GWA-3A-20180109-01	Water	01/09/18 10:15	01/15/18 09:58
400-148359-5	GWC-2-20180109-01	Water	01/09/18 11:16	01/15/18 09:58
400-148359-6	GWA-4-20180109-01	Water	01/09/18 12:10	01/15/18 09:58
400-148359-7	GWA-3B-20180109-01	Water	01/09/18 12:15	01/15/18 09:58
400-148359-8	GWC-3-20180109-01	Water	01/09/18 13:21	01/15/18 09:58
400-148359-9	GWC-4A-20180109-01	Water	01/09/18 15:10	01/15/18 09:58
400-148359-10	GWA-5-20180109-01	Water	01/09/18 15:14	01/15/18 09:58
400-148359-11	GWC-4B-20180109-01	Water	01/09/18 16:35	01/15/18 09:58
400-148359-12	DUP-1-20180109-01	Water	01/09/18 00:00	01/15/18 09:58
400-148359-13	GWC-5-20180110-01	Water	01/10/18 09:16	01/15/18 09:58
400-148359-15	GWC-7-20180110-01	Water	01/10/18 13:16	01/15/18 09:58
400-148359-16	GWC-6-20180111-01	Water	01/11/18 09:30	01/15/18 09:58
400-148359-17	FERB-1-20180110-01	Water	01/10/18 11:15	01/15/18 09:58
400-148359-18	FB-1-20180110-01	Water	01/10/18 11:25	01/15/18 09:58
400-148359-19	FERB-2-20180110-01	Water	01/10/18 11:30	01/15/18 09:58
400-148359-20	DUP-2-20180110-01	Water	01/10/18 11:35	01/15/18 09:58

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A-20180108-01

Lab Sample ID: 400-148359-1

Date Collected: 01/08/18 16:47

Matrix: Water

Date Received: 01/15/18 09:58

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		0.0822	0.0848	1.00	0.0762	pCi/L	01/22/18 08:21	02/13/18 05:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:21	02/13/18 05:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.354	U	0.244	0.246	1.00	0.380	pCi/L	01/22/18 08:52	01/26/18 11:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:52	01/26/18 11:36	1
Y Carrier	86.0		40 - 110					01/22/18 08:52	01/26/18 11:36	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.585		0.257	0.260	5.00	0.380	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-1A-20180108-01

Lab Sample ID: 400-148359-2

Date Collected: 01/08/18 17:02

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.162		0.0765	0.0779	1.00	0.0898	pCi/L	01/22/18 08:21	02/13/18 05:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:21	02/13/18 05:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.280	U	0.239	0.241	1.00	0.383	pCi/L	01/22/18 08:52	01/26/18 11:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:52	01/26/18 11:36	1
Y Carrier	85.2		40 - 110					01/22/18 08:52	01/26/18 11:36	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.442		0.251	0.253	5.00	0.383	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-1-20180109-01

Lab Sample ID: 400-148359-3

Date Collected: 01/09/18 09:36

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160		0.0699	0.0713	1.00	0.0663	pCi/L	01/22/18 08:21	02/13/18 05:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					01/22/18 08:21	02/13/18 05:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.381		0.229	0.231	1.00	0.347	pCi/L	01/22/18 08:52	01/26/18 11:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					01/22/18 08:52	01/26/18 11:36	1
Y Carrier	86.0		40 - 110					01/22/18 08:52	01/26/18 11:36	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.541		0.239	0.242	5.00	0.347	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3A-20180109-01

Lab Sample ID: 400-148359-4

Date Collected: 01/09/18 10:15

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.326		0.0972	0.102	1.00	0.0767	pCi/L	01/22/18 08:21	02/13/18 05:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					01/22/18 08:21	02/13/18 05:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.797		0.298	0.307	1.00	0.421	pCi/L	01/22/18 08:52	01/26/18 11:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					01/22/18 08:52	01/26/18 11:36	1
Y Carrier	88.6		40 - 110					01/22/18 08:52	01/26/18 11:36	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	1.12		0.313	0.324	5.00	0.421	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2-20180109-01

Lab Sample ID: 400-148359-5

Date Collected: 01/09/18 11:16

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.409		0.104	0.110	1.00	0.0678	pCi/L	01/22/18 08:21	02/13/18 05:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:21	02/13/18 05:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.624		0.273	0.279	1.00	0.397	pCi/L	01/22/18 08:52	01/26/18 11:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:52	01/26/18 11:36	1
Y Carrier	88.6		40 - 110					01/22/18 08:52	01/26/18 11:36	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		0.292	0.300	5.00	0.397	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-4-20180109-01

Lab Sample ID: 400-148359-6

Date Collected: 01/09/18 12:10

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.161		0.0653	0.0669	1.00	0.0521	pCi/L	01/22/18 08:21	02/13/18 05:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					01/22/18 08:21	02/13/18 05:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.143	U	0.239	0.239	1.00	0.402	pCi/L	01/22/18 08:52	01/26/18 11:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					01/22/18 08:52	01/26/18 11:37	1
Y Carrier	89.7		40 - 110					01/22/18 08:52	01/26/18 11:37	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.305	U	0.248	0.248	5.00	0.402	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-3B-20180109-01

Lab Sample ID: 400-148359-7

Date Collected: 01/09/18 12:15

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.197		0.0815	0.0834	1.00	0.0693	pCi/L	01/22/18 08:21	02/13/18 05:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					01/22/18 08:21	02/13/18 05:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.387		0.247	0.250	1.00	0.381	pCi/L	01/22/18 08:52	01/26/18 11:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					01/22/18 08:52	01/26/18 11:37	1
Y Carrier	89.0		40 - 110					01/22/18 08:52	01/26/18 11:37	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.583		0.260	0.264	5.00	0.381	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-3-20180109-01

Lab Sample ID: 400-148359-8

Date Collected: 01/09/18 13:21

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.271		0.0888	0.0920	1.00	0.0779	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.35		0.328	0.351	1.00	0.404	pCi/L	01/22/18 08:52	01/26/18 11:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					01/22/18 08:52	01/26/18 11:37	1
Y Carrier	84.5		40 - 110					01/22/18 08:52	01/26/18 11:37	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.62		0.340	0.363	5.00	0.404	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A-20180109-01

Lab Sample ID: 400-148359-9

Date Collected: 01/09/18 15:10

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.317		0.0916	0.0959	1.00	0.0646	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.269	U	0.218	0.219	1.00	0.345	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	89.0		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.585		0.236	0.239	5.00	0.345	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-5-20180109-01

Lab Sample ID: 400-148359-10

Date Collected: 01/09/18 15:14

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.837		0.148	0.166	1.00	0.0729	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.14		0.295	0.314	1.00	0.362	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	85.6		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.98		0.330	0.355	5.00	0.362	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4B-20180109-01

Lab Sample ID: 400-148359-11

Date Collected: 01/09/18 16:35

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.230		0.0807	0.0833	1.00	0.0692	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.448		0.235	0.239	1.00	0.349	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	87.5		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.678		0.248	0.253	5.00	0.349	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: DUP-1-20180109-01

Lab Sample ID: 400-148359-12

Date Collected: 01/09/18 00:00

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.185		0.0758	0.0776	1.00	0.0749	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.503		0.255	0.259	1.00	0.376	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	86.7		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.688		0.266	0.270	5.00	0.376	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5-20180110-01

Lab Sample ID: 400-148359-13

Date Collected: 01/10/18 09:16

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.87		0.307	0.464	1.00	0.0733	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.84		0.444	0.567	1.00	0.348	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	84.1		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.71		0.540	0.733	5.00	0.348	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-7-20180110-01

Lab Sample ID: 400-148359-15

Date Collected: 01/10/18 13:16

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.119		0.0642	0.0651	1.00	0.0736	pCi/L	01/22/18 08:21	02/13/18 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					01/22/18 08:21	02/13/18 05:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.817		0.269	0.279	1.00	0.354	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	86.4		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.936		0.277	0.286	5.00	0.354	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-6-20180111-01

Lab Sample ID: 400-148359-16

Date Collected: 01/11/18 09:30

Matrix: Water

Date Received: 01/15/18 09:58

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		0.0642	0.0654	1.00	0.0718	pCi/L	01/22/18 08:21	02/13/18 05:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					01/22/18 08:21	02/13/18 05:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.415		0.222	0.225	1.00	0.327	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	85.2		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.550		0.231	0.234	5.00	0.327	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-1-20180110-01

Lab Sample ID: 400-148359-17

Date Collected: 01/10/18 11:15

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0199	U	0.0351	0.0352	1.00	0.0630	pCi/L	01/22/18 08:21	02/13/18 05:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					01/22/18 08:21	02/13/18 05:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.414		0.222	0.225	1.00	0.328	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	86.4		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.433		0.225	0.228	5.00	0.328	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FB-1-20180110-01

Lab Sample ID: 400-148359-18

Date Collected: 01/10/18 11:25

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0339	U	0.0450	0.0451	1.00	0.0752	pCi/L	01/22/18 08:21	02/13/18 05:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					01/22/18 08:21	02/13/18 05:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.279	U	0.209	0.211	1.00	0.327	pCi/L	01/22/18 08:52	01/26/18 11:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					01/22/18 08:52	01/26/18 11:38	1
Y Carrier	87.1		40 - 110					01/22/18 08:52	01/26/18 11:38	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.313	U	0.214	0.216	5.00	0.327	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FERB-2-20180110-01

Lab Sample ID: 400-148359-19

Date Collected: 01/10/18 11:30

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00570	U	0.0377	0.0377	1.00	0.0762	pCi/L	01/22/18 08:21	02/13/18 05:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					01/22/18 08:21	02/13/18 05:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.846		0.269	0.280	1.00	0.355	pCi/L	01/22/18 08:52	01/26/18 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					01/22/18 08:52	01/26/18 11:39	1
Y Carrier	84.1		40 - 110					01/22/18 08:52	01/26/18 11:39	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.852		0.272	0.283	5.00	0.355	pCi/L		02/13/18 17:45	1

Client Sample Results

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

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Client Sample ID: DUP-2-20180110-01

Lab Sample ID: 400-148359-20

Date Collected: 01/10/18 11:35

Matrix: Water

Date Received: 01/15/18 09:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.57		0.291	0.434	1.00	0.0788	pCi/L	01/22/18 08:21	02/13/18 05:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					01/22/18 08:21	02/13/18 05:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.30		0.456	0.603	1.00	0.344	pCi/L	01/22/18 08:52	01/26/18 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					01/22/18 08:52	01/26/18 11:39	1
Y Carrier	83.7		40 - 110					01/22/18 08:52	01/26/18 11:39	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.87		0.541	0.743	5.00	0.344	pCi/L		02/13/18 17:45	1

Definitions/Glossary

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
F	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWA-2A-20180108-01

Lab Sample ID: 400-148359-1

Date Collected: 01/08/18 16:47

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:49	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:36	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWA-1A-20180108-01

Lab Sample ID: 400-148359-2

Date Collected: 01/08/18 17:02

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:49	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:36	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWC-1-20180109-01

Lab Sample ID: 400-148359-3

Date Collected: 01/09/18 09:36

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:50	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:36	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWA-3A-20180109-01

Lab Sample ID: 400-148359-4

Date Collected: 01/09/18 10:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:50	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:36	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-2-20180109-01

Lab Sample ID: 400-148359-5

Date Collected: 01/09/18 11:16

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:50	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:36	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWA-4-20180109-01

Lab Sample ID: 400-148359-6

Date Collected: 01/09/18 12:10

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:50	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:37	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWA-3B-20180109-01

Lab Sample ID: 400-148359-7

Date Collected: 01/09/18 12:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:50	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:37	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWC-3-20180109-01

Lab Sample ID: 400-148359-8

Date Collected: 01/09/18 13:21

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:37	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-4A-20180109-01

Lab Sample ID: 400-148359-9

Date Collected: 01/09/18 15:10

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWA-5-20180109-01

Lab Sample ID: 400-148359-10

Date Collected: 01/09/18 15:14

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWC-4B-20180109-01

Lab Sample ID: 400-148359-11

Date Collected: 01/09/18 16:35

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: DUP-1-20180109-01

Lab Sample ID: 400-148359-12

Date Collected: 01/09/18 00:00

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: GWC-5-20180110-01

Lab Sample ID: 400-148359-13

Date Collected: 01/10/18 09:16

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWC-7-20180110-01

Lab Sample ID: 400-148359-15

Date Collected: 01/10/18 13:16

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350657	02/13/18 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: GWC-6-20180111-01

Lab Sample ID: 400-148359-16

Date Collected: 01/11/18 09:30

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350658	02/13/18 05:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: FERB-1-20180110-01

Lab Sample ID: 400-148359-17

Date Collected: 01/10/18 11:15

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350658	02/13/18 05:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Client Sample ID: FB-1-20180110-01

Lab Sample ID: 400-148359-18

Date Collected: 01/10/18 11:25

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350658	02/13/18 05:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348338	01/26/18 11:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: FERB-2-20180110-01

Lab Sample ID: 400-148359-19

Date Collected: 01/10/18 11:30

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350658	02/13/18 05:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348335	01/26/18 11:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	RTM	TAL SL

Client Sample ID: DUP-2-20180110-01

Lab Sample ID: 400-148359-20

Date Collected: 01/10/18 11:35

Matrix: Water

Date Received: 01/15/18 09:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			347181	01/22/18 08:21	SJC	TAL SL
Total/NA	Analysis	9315		1	350658	02/13/18 05:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			347209	01/22/18 08:52	SJC	TAL SL
Total/NA	Analysis	9320		1	348335	01/26/18 11:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	350929	02/13/18 17:45	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: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Rad

Prep Batch: 347181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total/NA	Water	PrecSep-21	
400-148359-2	GWA-1A-20180108-01	Total/NA	Water	PrecSep-21	
400-148359-3	GWC-1-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-4	GWA-3A-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-5	GWC-2-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-6	GWA-4-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-7	GWA-3B-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-8	GWC-3-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-9	GWC-4A-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-10	GWA-5-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-11	GWC-4B-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-12	DUP-1-20180109-01	Total/NA	Water	PrecSep-21	
400-148359-13	GWC-5-20180110-01	Total/NA	Water	PrecSep-21	
400-148359-15	GWC-7-20180110-01	Total/NA	Water	PrecSep-21	
400-148359-16	GWC-6-20180111-01	Total/NA	Water	PrecSep-21	
400-148359-17	FERB-1-20180110-01	Total/NA	Water	PrecSep-21	
400-148359-18	FB-1-20180110-01	Total/NA	Water	PrecSep-21	
400-148359-19	FERB-2-20180110-01	Total/NA	Water	PrecSep-21	
400-148359-20	DUP-2-20180110-01	Total/NA	Water	PrecSep-21	
MB 160-347181/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-347181/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-148359-8 DU	GWC-3-20180109-01	Total/NA	Water	PrecSep-21	

Prep Batch: 347209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-148359-1	GWA-2A-20180108-01	Total/NA	Water	PrecSep_0	
400-148359-2	GWA-1A-20180108-01	Total/NA	Water	PrecSep_0	
400-148359-3	GWC-1-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-4	GWA-3A-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-5	GWC-2-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-6	GWA-4-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-7	GWA-3B-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-8	GWC-3-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-9	GWC-4A-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-10	GWA-5-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-11	GWC-4B-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-12	DUP-1-20180109-01	Total/NA	Water	PrecSep_0	
400-148359-13	GWC-5-20180110-01	Total/NA	Water	PrecSep_0	
400-148359-15	GWC-7-20180110-01	Total/NA	Water	PrecSep_0	
400-148359-16	GWC-6-20180111-01	Total/NA	Water	PrecSep_0	
400-148359-17	FERB-1-20180110-01	Total/NA	Water	PrecSep_0	
400-148359-18	FB-1-20180110-01	Total/NA	Water	PrecSep_0	
400-148359-19	FERB-2-20180110-01	Total/NA	Water	PrecSep_0	
400-148359-20	DUP-2-20180110-01	Total/NA	Water	PrecSep_0	
MB 160-347209/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-347209/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-148359-8 DU	GWC-3-20180109-01	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-347181/1-A
Matrix: Water
Analysis Batch: 350657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 347181

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03293	U	0.0403	0.0404	1.00	0.0658	pCi/L	01/22/18 08:21	02/13/18 05:49	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					01/22/18 08:21	02/13/18 05:49	1

Lab Sample ID: LCS 160-347181/2-A
Matrix: Water
Analysis Batch: 350657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 347181

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	12.57		1.26	1.00	0.0768	pCi/L	107	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: 400-148359-8 DU
Matrix: Water
Analysis Batch: 350657

Client Sample ID: GWC-3-20180109-01
Prep Type: Total/NA
Prep Batch: 347181

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.271		0.2063		0.0798	1.00	0.0718	pCi/L	0.38	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	101		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-347209/1-A
Matrix: Water
Analysis Batch: 348338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 347209

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7730		0.259	0.268	1.00	0.346	pCi/L	01/22/18 08:52	01/26/18 11:36	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					01/22/18 08:52	01/26/18 11:36	1
Y Carrier	86.4		40 - 110					01/22/18 08:52	01/26/18 11:36	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-148359-2
 SDG: McIntosh Ash Disposal Area 3

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-347209/2-A
Matrix: Water
Analysis Batch: 348338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 347209

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.61	9.093		1.05	1.00	0.352	pCi/L	106	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	87.1		40 - 110

Lab Sample ID: 400-148359-8 DU
Matrix: Water
Analysis Batch: 348338

Client Sample ID: GWC-3-20180109-01
Prep Type: Total/NA
Prep Batch: 347209

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	1.35		0.4986	F	0.256	1.00	0.375	pCi/L	1.40	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	88.6		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-148359-8 DU
Matrix: Water
Analysis Batch: 350929

Client Sample ID: GWC-3-20180109-01
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	1.62		0.7049		0.268	5.00	0.375	pCi/L	1.45	

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 Name: Lauren Petty
 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 - LF3
 Site: Phase II CCR & State Permit

Lab PM: Whitmire, Cheyenne R.
 E-Mail: cheyenne.whitmire@testamericainc.com
 Due Date Requested:
 TAT Requested (days):
 FO #:
 WO #:
 Project #:
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Semisolid, Other)	Preservation Code:
GWA-2A-20180108-01	1/8/18	1647	G	W	
GWA-1A-20180108-01	1/8/18	1702	G	W	
GWC-1-20180109-01	1/9/18	0936	G	W	
GWA-3A-20180109-01	1/9/18	1015	G	W	
GWC-2-20180109-01	1/9/18	1116	G	W	
GWA-4-20180109-01	1/9/18	1210	G	W	
GWA-3B-20180109-01	1/9/18	1215	G	W	
GWC-3-20180109-01	1/9/18	1321	G	W	
GWA-5-20180109-01	1/9/18	1510	G	W	
GWC-4B-20180109-01	1/9/18	1514	G	W	
DUP-1-20180109-01	1/9/18	1635	G	W	
DUP-1-20180109-01	1/9/18	-	G	W	

Sample Identification	Field Filtered Sample (Yes or No)		Metals - (Part 257 Appendix III & Appendix IV) EPA 6020		Metals State Permit - EPA (6020) Ba, Be, Cd, Cr, Cu, Co, Pb, V, Zn		Total Number of Containers	Special Instructions/Note:
	Perform MS/MSD (Yes or No)	TDS - SM 2540C : ClF, SO4 - EPA 300	I	D	D	D		
GWA-2A-20180108-01	X	X	N	X	X	X	3	
GWA-1A-20180108-01	X	X	N	X	X	X	3	
GWC-1-20180109-01	X	X	N	X	X	X	3	
GWA-3A-20180109-01	X	X	N	X	X	X	3	
GWC-2-20180109-01	X	X	N	X	X	X	3	
GWA-4-20180109-01	X	X	N	X	X	X	3	
GWA-3B-20180109-01	X	X	N	X	X	X	3	
GWC-3-20180109-01	X	X	N	X	X	X	3	
GWA-5-20180109-01	X	X	N	X	X	X	3	
GWC-4B-20180109-01	X	X	N	X	X	X	3	
DUP-1-20180109-01	X	X	N	X	X	X	3	
DUP-1-20180109-01	X	X	N	X	X	X	3	EXTRA RAD BOTTLE

Analysis Requested: [Blank]

Preservation Codes:
 A - HCL, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2SO4, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4.5, X - EDTA, Y - EDTA, Z - other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Relinquished by: [Signature]
 Date/Time: 1-11-18 17:47
 Company: EPA
 Relinquished by: [Signature]
 Date/Time: 1/12/18 1800
 Company: TARA
 Relinquished by: [Signature]
 Date/Time: 1/15/18 0928
 Company: TA-FEN
 Custody Seal No.: (F+Q-4) 1.6/10.510.511-710.8/14/1.0/1.4
 (1518) 1.2/0.1/0.1/1.3/0.4/1.0/0.6/1.0

IR-B 2.6/0.0/2.2/0.0/0.0/3.0(TA-FEN)

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-148359-2
SDG Number: McIntosh Ash Disposal Area 3

Login Number: 148359

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	1.2°C, 0.1°C, 0.1°C, 1.3°C, 0.4°C, 1.0°C, 0.6°C, 1.0°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.	False	FB-2 on COC should have been DUP-2.
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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-148359-2
SDG Number: McIntosh Ash Disposal Area 3

Login Number: 148359
List Number: 2
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 01/19/18 02:50 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0, 18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

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	01-12-19
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	10-31-18
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	12-31-18
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	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-17 *
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-148359-2
SDG: McIntosh Ash Disposal Area 3

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-21-18 *
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18

* 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: 400-151461-1

TestAmerica Sample Delivery Group: Ash Landfill 3

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

4/13/2018 3:37:20 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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	9
Sample Summary	10
Client Sample Results	11
Definitions	30
Chronicle	31
QC Association	36
QC Sample Results	40
Chain of Custody	46
Receipt Checklists	49
Certification Summary	50

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Job ID: 400-151461-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151461-1

HPLC/IC

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 393176 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 393092 and analytical batch 393503 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The method blank for preparation batch 393092 and analytical batch 393503 contained Lithium 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.



Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-151461-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0044		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.012	B F1	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0014	B	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-151461-2

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
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.5		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	0.00040	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.012	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0017	B	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4

Lab Sample ID: 400-151461-3

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	3.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.89		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00081	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0017	J B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00054	J B	0.0013	0.00024	mg/L	5		6020	Total Recoverable

Client Sample ID: FB-01

Lab Sample ID: 400-151461-4

No Detections.

Client Sample ID: FERB-01

Lab Sample ID: 400-151461-5

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: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-3A

Lab Sample ID: 400-151461-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.4		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.054		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0037		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0032	J B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00028	J B	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-5

Lab Sample ID: 400-151461-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.21		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	31		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.18		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.037	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	4.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0019	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.00030	J B	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	48		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B

Lab Sample ID: 400-151461-8

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	11		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.073		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	2.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00074	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00036	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: GWC-1

Lab Sample ID: 400-151461-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		1.0	0.89	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-1 (Continued)

Lab Sample ID: 400-151461-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total
Calcium	0.14	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-3

Lab Sample ID: 400-151461-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10	F1	1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0036		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00050	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.010	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7

Lab Sample ID: 400-151461-11

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
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total
Calcium	1.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0081		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.010	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.023	B	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-5

Lab Sample ID: 400-151461-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.45		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	26		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.60		0.0025	0.00049	mg/L	5		6020	Total
Calcium	9.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.010		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0044	J B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0080	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0098	B	0.0013	0.00024	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: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-5 (Continued)

Lab Sample ID: 400-151461-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.00051		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	60		50	34	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-151461-13

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
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.13	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-151461-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0036		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00051	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0094	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-02

Lab Sample ID: 400-151461-15

No Detections.

Client Sample ID: GWC-4A

Lab Sample ID: 400-151461-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.79	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.44		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	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-151461-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.78	J	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: 400-151461-1
 SDG: Ash Landfill 3

Client Sample ID: GWC-6 (Continued)

Lab Sample ID: 400-151461-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.012	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00027	J B	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-2

Lab Sample ID: 400-151461-18

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
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.035	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	2.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0032		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00080	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0037	J B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-03

Lab Sample ID: 400-151461-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00051	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: 400-151461-1
SDG: Ash Landfill 3

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: 400-151461-1
SDG: Ash Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151461-1	GWA-1A	Water	03/27/18 12:35	03/28/18 09:44
400-151461-2	GWA-2A	Water	03/27/18 12:50	03/28/18 09:44
400-151461-3	GWA-4	Water	03/27/18 15:30	03/28/18 09:44
400-151461-4	FB-01	Water	03/27/18 14:13	03/28/18 09:44
400-151461-5	FERB-01	Water	03/27/18 17:25	03/28/18 09:44
400-151461-6	GWA-3A	Water	03/27/18 17:25	03/28/18 09:44
400-151461-7	GWA-5	Water	03/27/18 17:50	03/28/18 09:44
400-151461-8	GWA-3B	Water	03/28/18 10:20	03/29/18 10:20
400-151461-9	GWC-1	Water	03/28/18 14:05	03/30/18 11:14
400-151461-10	GWC-3	Water	03/28/18 16:10	03/29/18 10:20
400-151461-11	GWA-7	Water	03/28/18 13:40	03/29/18 10:20
400-151461-12	GWC-5	Water	03/28/18 16:00	03/29/18 10:20
400-151461-13	DUP-01	Water	03/28/18 00:00	03/30/18 11:14
400-151461-14	DUP-02	Water	03/28/18 00:00	03/29/18 10:20
400-151461-15	FERB-02	Water	03/28/18 16:25	03/30/18 11:14
400-151461-16	GWC-4A	Water	03/28/18 15:08	03/29/18 10:20
400-151461-17	GWC-6	Water	03/29/18 08:20	03/30/18 11:14
400-151461-18	GWC-2	Water	03/29/18 10:58	03/30/18 11:14
400-151461-19	FB-03	Water	03/29/18 14:00	03/30/18 11:14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-1A

Date Collected: 03/27/18 12:35

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0		1.0	0.89	mg/L			04/07/18 15:36	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 15:36	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 15:36	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		04/07/18 11:50	04/10/18 17:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 17:13	5
Barium	0.023		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 17:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:13	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 17:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:13	5
Calcium	1.7		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 17:13	5
Chromium	0.0044		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 17:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 17:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 17:13	5
Lithium	0.012	B F1	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 17:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 17:13	5
Selenium	0.0014	B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 17:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 17:13	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		04/11/18 14:53	04/12/18 11:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-2A
Date Collected: 03/27/18 12:50
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-2
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			04/07/18 15:59	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 15:59	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 15:59	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		04/07/18 11:50	04/10/18 17:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 17:38	5
Barium	0.041		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 17:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:38	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 17:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:38	5
Calcium	3.5		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 17:38	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 17:38	5
Cobalt	0.00040	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 17:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 17:38	5
Lithium	0.012	B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 17:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 17:38	5
Selenium	0.0017	B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 17:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 17:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 11:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-4
Date Collected: 03/27/18 15:30
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-3
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			04/07/18 17:07	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 17:07	1
Sulfate	3.8		1.0	0.70	mg/L			04/07/18 17:07	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 17:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 17:43	5
Barium	0.039		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 17:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:43	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 17:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:43	5
Calcium	0.89		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 17:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 17:43	5
Cobalt	0.00081	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 17:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 17:43	5
Lithium	0.0017	J B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 17:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 17:43	5
Selenium	0.00054	J B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 17:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 17:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 11:37	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			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Client Sample ID: FB-01
Date Collected: 03/27/18 14:13
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/07/18 17:30	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 17:30	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 17:30	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		04/07/18 11:50	04/10/18 17:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 17:47	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 17:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:47	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 17:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:47	5
Calcium	<0.13		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 17:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 17:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 17:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 17:47	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 17:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 17:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 17:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 17:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 11:39	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			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Client Sample ID: FERB-01
Date Collected: 03/27/18 17:25
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-5
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			04/07/18 17:53	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 17:53	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 17:53	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 17:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 17:52	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 17:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:52	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 17:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:52	5
Calcium	<0.13		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 17:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 17:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 17:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 17:52	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 17:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 17:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 17:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 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		04/11/18 14:53	04/12/18 11:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-3A

Date Collected: 03/27/18 17:25

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.4		1.0	0.89	mg/L			04/07/18 18:16	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 18:16	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 18:16	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 17:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 17:57	5
Barium	0.054		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 17:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:57	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 17:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 17:57	5
Calcium	1.9		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 17:57	5
Chromium	0.0037		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 17:57	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 17:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 17:57	5
Lithium	0.0032	J B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 17:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 17:57	5
Selenium	0.00028	J B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 17:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 17:57	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		04/11/18 14:53	04/12/18 11:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-5
Date Collected: 03/27/18 17:50
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-7
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			04/07/18 18:38	1
Fluoride	0.21		0.20	0.082	mg/L			04/07/18 18:38	1
Sulfate	31		1.0	0.70	mg/L			04/07/18 18:38	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		04/07/18 11:50	04/10/18 18:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:24	5
Barium	0.18		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:24	5
Boron	0.037	J	0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:24	5
Calcium	4.8		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:24	5
Cobalt	0.0019	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:24	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:24	5
Selenium	0.00030	J B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 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		04/11/18 14:53	04/12/18 11:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			03/29/18 13:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-3B

Date Collected: 03/28/18 10:20

Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-8

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			04/07/18 19:01	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 19:01	1
Sulfate	11		1.0	0.70	mg/L			04/07/18 19:01	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 18:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:28	5
Barium	0.073		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:28	5
Boron	0.021	J	0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:28	5
Calcium	2.2		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:28	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:28	5
Cobalt	0.00074	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:28	5
Lead	0.00036	J	0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:28	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:28	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 11:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		5.0	3.4	mg/L			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-1
Date Collected: 03/28/18 14:05
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-9
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			04/08/18 01:07	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 01:07	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 01:07	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		04/07/18 11:50	04/10/18 18:33	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:33	5
Barium	0.014		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:33	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:33	5
Calcium	0.14	J	0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:33	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:33	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:33	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:33	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 11:48	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			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-3
Date Collected: 03/28/18 16:10
Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-10
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10	F1	1.0	0.89	mg/L			04/08/18 01:30	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 01:30	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 01:30	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		04/07/18 11:50	04/10/18 18:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:37	5
Barium	0.039		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:37	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:37	5
Calcium	2.1		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:37	5
Chromium	0.0036		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:37	5
Cobalt	0.00050	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:37	5
Lithium	0.010	B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:37	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 11:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-7
Date Collected: 03/28/18 13:40
Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-11
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			04/08/18 02:39	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 02:39	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 02:39	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		04/07/18 11:50	04/10/18 18:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:42	5
Barium	0.019		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:42	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:42	5
Calcium	1.2		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:42	5
Chromium	0.0081		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:42	5
Lithium	0.010	B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:42	5
Selenium	0.023	B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:42	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 12:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Client Sample ID: GWC-5
Date Collected: 03/28/18 16:00
Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-12
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			04/08/18 03:01	1
Fluoride	0.45		0.20	0.082	mg/L			04/08/18 03:01	1
Sulfate	26		1.0	0.70	mg/L			04/08/18 03:01	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 18:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:46	5
Barium	0.60		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:46	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:46	5
Calcium	9.5		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:46	5
Cobalt	0.010		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:46	5
Lithium	0.0044	J B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:46	5
Molybdenum	0.0080	J	0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:46	5
Selenium	0.0098	B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:46	5
Thallium	0.00051		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:46	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 12:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	60		50	34	mg/L			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: DUP-01
Date Collected: 03/28/18 00:00
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-13
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			04/08/18 03:24	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 03:24	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 03:24	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		04/07/18 11:50	04/10/18 18:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:51	5
Barium	0.015		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:51	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:51	5
Calcium	0.13	J	0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:51	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:51	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		04/11/18 14:53	04/12/18 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	76		5.0	3.4	mg/L			04/03/18 16:48	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Client Sample ID: DUP-02
Date Collected: 03/28/18 00:00
Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-14
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.9		1.0	0.89	mg/L			04/08/18 04:33	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 04:33	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 04:33	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 18:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 18:55	5
Barium	0.041		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 18:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:55	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 18:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 18:55	5
Calcium	2.1		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 18:55	5
Chromium	0.0036		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 18:55	5
Cobalt	0.00051	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 18:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 18:55	5
Lithium	0.0094	B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 18:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 18:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 18:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 18:55	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		04/11/18 14:53	04/12/18 12:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			04/03/18 16:48	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Client Sample ID: FERB-02
Date Collected: 03/28/18 16:25
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-15
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			04/08/18 04:56	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 04:56	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 04:56	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		04/07/18 11:50	04/10/18 19:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 19:00	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 19:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:00	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 19:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:00	5
Calcium	<0.13		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 19:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 19:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 19:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 19:00	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 19:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 19:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 19:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 19:00	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		04/11/18 14:53	04/12/18 12:14	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			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-4A

Date Collected: 03/28/18 15:08

Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-16

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			04/08/18 05:18	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 05:18	1
Sulfate	0.79	J	1.0	0.70	mg/L			04/08/18 05:18	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		04/07/18 11:50	04/10/18 19:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 19:04	5
Barium	0.037		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 19:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:04	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 19:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:04	5
Calcium	0.44		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 19:04	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 19:04	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 19:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 19:04	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 19:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 19:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 19:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 19:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			04/03/18 13:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-6
Date Collected: 03/29/18 08:20
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-17
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		1.0	0.89	mg/L			04/08/18 05:41	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 05:41	1
Sulfate	0.78	J	1.0	0.70	mg/L			04/08/18 05:41	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 19:31	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 19:31	5
Barium	0.044		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 19:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:31	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 19:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:31	5
Calcium	1.5		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 19:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 19:31	5
Cobalt	0.00052	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 19:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 19:31	5
Lithium	0.012	B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 19:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 19:31	5
Selenium	0.00027	J B	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 19:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 19:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 12:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			04/04/18 17:07	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-2
Date Collected: 03/29/18 10:58
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-18
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.3		1.0	0.89	mg/L			04/08/18 06:04	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 06:04	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 06:04	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 19:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 19:36	5
Barium	0.060		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 19:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:36	5
Boron	0.035	J	0.050	0.021	mg/L		04/07/18 11:50	04/10/18 19:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:36	5
Calcium	2.2		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 19:36	5
Chromium	0.0032		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 19:36	5
Cobalt	0.00080	J	0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 19:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 19:36	5
Lithium	0.0037	J B	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 19:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 19:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 19:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 19:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 12:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			04/04/18 17:07	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: FB-03
Date Collected: 03/29/18 14:00
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-19
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			04/08/18 06:27	1
Fluoride	<0.082		0.20	0.082	mg/L			04/08/18 06:27	1
Sulfate	<0.70		1.0	0.70	mg/L			04/08/18 06:27	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 19:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 19:40	5
Barium	0.00051	J	0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 19:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:40	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 19:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 19:40	5
Calcium	<0.13		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 19:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 19:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 19:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 19:40	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 19:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 19:40	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 19:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 19:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:53	04/12/18 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/04/18 17:07	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWA-1A

Date Collected: 03/27/18 12:35

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 15:36	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 17:13	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 03/27/18 12:50

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 15:59	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 17:38	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

Client Sample ID: GWA-4

Date Collected: 03/27/18 15:30

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 17:07	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 17:43	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

Client Sample ID: FB-01

Date Collected: 03/27/18 14:13

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 17:30	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 17:47	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: FERB-01

Lab Sample ID: 400-151461-5

Date Collected: 03/27/18 17:25

Matrix: Water

Date Received: 03/28/18 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 17:53	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 17:52	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

Client Sample ID: GWA-3A

Lab Sample ID: 400-151461-6

Date Collected: 03/27/18 17:25

Matrix: Water

Date Received: 03/28/18 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 18:16	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 17:57	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

Client Sample ID: GWA-5

Lab Sample ID: 400-151461-7

Date Collected: 03/27/18 17:50

Matrix: Water

Date Received: 03/28/18 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 18:38	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:24	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	391989	03/29/18 13:18	RRC	TAL PEN

Client Sample ID: GWA-3B

Lab Sample ID: 400-151461-8

Date Collected: 03/28/18 10:20

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393088	04/07/18 19:01	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:28	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-1

Lab Sample ID: 400-151461-9

Date Collected: 03/28/18 14:05

Matrix: Water

Date Received: 03/30/18 11:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 01:07	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:33	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

Client Sample ID: GWC-3

Lab Sample ID: 400-151461-10

Date Collected: 03/28/18 16:10

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 01:30	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:37	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 11:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

Client Sample ID: GWA-7

Lab Sample ID: 400-151461-11

Date Collected: 03/28/18 13:40

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 02:39	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:42	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

Client Sample ID: GWC-5

Lab Sample ID: 400-151461-12

Date Collected: 03/28/18 16:00

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 03:01	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:46	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: DUP-01

Lab Sample ID: 400-151461-13

Date Collected: 03/28/18 00:00

Matrix: Water

Date Received: 03/30/18 11:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 03:24	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:51	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392521	04/03/18 16:48	TET	TAL PEN

Client Sample ID: DUP-02

Lab Sample ID: 400-151461-14

Date Collected: 03/28/18 00:00

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 04:33	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 18:55	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392521	04/03/18 16:48	TET	TAL PEN

Client Sample ID: FERB-02

Lab Sample ID: 400-151461-15

Date Collected: 03/28/18 16:25

Matrix: Water

Date Received: 03/30/18 11:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 04:56	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 19:00	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

Client Sample ID: GWC-4A

Lab Sample ID: 400-151461-16

Date Collected: 03/28/18 15:08

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 05:18	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 19:04	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392529	04/03/18 13:23	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Client Sample ID: GWC-6

Date Collected: 03/29/18 08:20

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 05:41	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 19:31	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392678	04/04/18 17:07	TET	TAL PEN

Client Sample ID: GWC-2

Date Collected: 03/29/18 10:58

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 06:04	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 19:36	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392678	04/04/18 17:07	TET	TAL PEN

Client Sample ID: FB-03

Date Collected: 03/29/18 14:00

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	393176	04/08/18 06:27	JAW	TAL PEN
Total Recoverable	Prep	3005A			393092	04/07/18 11:50	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	393503	04/10/18 19:40	DRE	TAL PEN
Total/NA	Prep	7470A			393570	04/11/18 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	393751	04/12/18 12:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	392678	04/04/18 17:07	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: 400-151461-1
SDG: Ash Landfill 3

HPLC/IC

Analysis Batch: 393088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total/NA	Water	300.0	
400-151461-2	GWA-2A	Total/NA	Water	300.0	
400-151461-3	GWA-4	Total/NA	Water	300.0	
400-151461-4	FB-01	Total/NA	Water	300.0	
400-151461-5	FERB-01	Total/NA	Water	300.0	
400-151461-6	GWA-3A	Total/NA	Water	300.0	
400-151461-7	GWA-5	Total/NA	Water	300.0	
400-151461-8	GWA-3B	Total/NA	Water	300.0	
MB 400-393088/4	Method Blank	Total/NA	Water	300.0	
LCS 400-393088/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-393088/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-151428-A-23 MS	Matrix Spike	Total/NA	Water	300.0	
400-151428-A-23 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 393176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-9	GWC-1	Total/NA	Water	300.0	
400-151461-10	GWC-3	Total/NA	Water	300.0	
400-151461-11	GWA-7	Total/NA	Water	300.0	
400-151461-12	GWC-5	Total/NA	Water	300.0	
400-151461-13	DUP-01	Total/NA	Water	300.0	
400-151461-14	DUP-02	Total/NA	Water	300.0	
400-151461-15	FERB-02	Total/NA	Water	300.0	
400-151461-16	GWC-4A	Total/NA	Water	300.0	
400-151461-17	GWC-6	Total/NA	Water	300.0	
400-151461-18	GWC-2	Total/NA	Water	300.0	
400-151461-19	FB-03	Total/NA	Water	300.0	
MB 400-393176/4	Method Blank	Total/NA	Water	300.0	
LCS 400-393176/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-393176/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-151461-10 MS	GWC-3	Total/NA	Water	300.0	
400-151461-10 MSD	GWC-3	Total/NA	Water	300.0	

Metals

Prep Batch: 393092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total Recoverable	Water	3005A	
400-151461-2	GWA-2A	Total Recoverable	Water	3005A	
400-151461-3	GWA-4	Total Recoverable	Water	3005A	
400-151461-4	FB-01	Total Recoverable	Water	3005A	
400-151461-5	FERB-01	Total Recoverable	Water	3005A	
400-151461-6	GWA-3A	Total Recoverable	Water	3005A	
400-151461-7	GWA-5	Total Recoverable	Water	3005A	
400-151461-8	GWA-3B	Total Recoverable	Water	3005A	
400-151461-9	GWC-1	Total Recoverable	Water	3005A	
400-151461-10	GWC-3	Total Recoverable	Water	3005A	
400-151461-11	GWA-7	Total Recoverable	Water	3005A	
400-151461-12	GWC-5	Total Recoverable	Water	3005A	
400-151461-13	DUP-01	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Metals (Continued)

Prep Batch: 393092 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-14	DUP-02	Total Recoverable	Water	3005A	
400-151461-15	FERB-02	Total Recoverable	Water	3005A	
400-151461-16	GWC-4A	Total Recoverable	Water	3005A	
400-151461-17	GWC-6	Total Recoverable	Water	3005A	
400-151461-18	GWC-2	Total Recoverable	Water	3005A	
400-151461-19	FB-03	Total Recoverable	Water	3005A	
MB 400-393092/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-393092/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-151461-1 MS	GWA-1A	Total Recoverable	Water	3005A	
400-151461-1 MSD	GWA-1A	Total Recoverable	Water	3005A	

Analysis Batch: 393503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total Recoverable	Water	6020	393092
400-151461-2	GWA-2A	Total Recoverable	Water	6020	393092
400-151461-3	GWA-4	Total Recoverable	Water	6020	393092
400-151461-4	FB-01	Total Recoverable	Water	6020	393092
400-151461-5	FERB-01	Total Recoverable	Water	6020	393092
400-151461-6	GWA-3A	Total Recoverable	Water	6020	393092
400-151461-7	GWA-5	Total Recoverable	Water	6020	393092
400-151461-8	GWA-3B	Total Recoverable	Water	6020	393092
400-151461-9	GWC-1	Total Recoverable	Water	6020	393092
400-151461-10	GWC-3	Total Recoverable	Water	6020	393092
400-151461-11	GWA-7	Total Recoverable	Water	6020	393092
400-151461-12	GWC-5	Total Recoverable	Water	6020	393092
400-151461-13	DUP-01	Total Recoverable	Water	6020	393092
400-151461-14	DUP-02	Total Recoverable	Water	6020	393092
400-151461-15	FERB-02	Total Recoverable	Water	6020	393092
400-151461-16	GWC-4A	Total Recoverable	Water	6020	393092
400-151461-17	GWC-6	Total Recoverable	Water	6020	393092
400-151461-18	GWC-2	Total Recoverable	Water	6020	393092
400-151461-19	FB-03	Total Recoverable	Water	6020	393092
MB 400-393092/1-A ^5	Method Blank	Total Recoverable	Water	6020	393092
LCS 400-393092/2-A	Lab Control Sample	Total Recoverable	Water	6020	393092
400-151461-1 MS	GWA-1A	Total Recoverable	Water	6020	393092
400-151461-1 MSD	GWA-1A	Total Recoverable	Water	6020	393092

Prep Batch: 393570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total/NA	Water	7470A	
400-151461-2	GWA-2A	Total/NA	Water	7470A	
400-151461-3	GWA-4	Total/NA	Water	7470A	
400-151461-4	FB-01	Total/NA	Water	7470A	
400-151461-5	FERB-01	Total/NA	Water	7470A	
400-151461-6	GWA-3A	Total/NA	Water	7470A	
400-151461-7	GWA-5	Total/NA	Water	7470A	
400-151461-8	GWA-3B	Total/NA	Water	7470A	
400-151461-9	GWC-1	Total/NA	Water	7470A	
400-151461-10	GWC-3	Total/NA	Water	7470A	
400-151461-11	GWA-7	Total/NA	Water	7470A	
400-151461-12	GWC-5	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Metals (Continued)

Prep Batch: 393570 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-13	DUP-01	Total/NA	Water	7470A	
400-151461-14	DUP-02	Total/NA	Water	7470A	
400-151461-15	FERB-02	Total/NA	Water	7470A	
400-151461-16	GWC-4A	Total/NA	Water	7470A	
400-151461-17	GWC-6	Total/NA	Water	7470A	
400-151461-18	GWC-2	Total/NA	Water	7470A	
400-151461-19	FB-03	Total/NA	Water	7470A	
MB 400-393570/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-393570/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-151461-2 MS	GWA-2A	Total/NA	Water	7470A	
400-151461-2 MSD	GWA-2A	Total/NA	Water	7470A	

Analysis Batch: 393751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total/NA	Water	7470A	393570
400-151461-2	GWA-2A	Total/NA	Water	7470A	393570
400-151461-3	GWA-4	Total/NA	Water	7470A	393570
400-151461-4	FB-01	Total/NA	Water	7470A	393570
400-151461-5	FERB-01	Total/NA	Water	7470A	393570
400-151461-6	GWA-3A	Total/NA	Water	7470A	393570
400-151461-7	GWA-5	Total/NA	Water	7470A	393570
400-151461-8	GWA-3B	Total/NA	Water	7470A	393570
400-151461-9	GWC-1	Total/NA	Water	7470A	393570
400-151461-10	GWC-3	Total/NA	Water	7470A	393570
400-151461-11	GWA-7	Total/NA	Water	7470A	393570
400-151461-12	GWC-5	Total/NA	Water	7470A	393570
400-151461-13	DUP-01	Total/NA	Water	7470A	393570
400-151461-14	DUP-02	Total/NA	Water	7470A	393570
400-151461-15	FERB-02	Total/NA	Water	7470A	393570
400-151461-16	GWC-4A	Total/NA	Water	7470A	393570
400-151461-17	GWC-6	Total/NA	Water	7470A	393570
400-151461-18	GWC-2	Total/NA	Water	7470A	393570
400-151461-19	FB-03	Total/NA	Water	7470A	393570
MB 400-393570/14-A	Method Blank	Total/NA	Water	7470A	393570
LCS 400-393570/15-A	Lab Control Sample	Total/NA	Water	7470A	393570
400-151461-2 MS	GWA-2A	Total/NA	Water	7470A	393570
400-151461-2 MSD	GWA-2A	Total/NA	Water	7470A	393570

General Chemistry

Analysis Batch: 391989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total/NA	Water	SM 2540C	
400-151461-2	GWA-2A	Total/NA	Water	SM 2540C	
400-151461-3	GWA-4	Total/NA	Water	SM 2540C	
400-151461-4	FB-01	Total/NA	Water	SM 2540C	
400-151461-5	FERB-01	Total/NA	Water	SM 2540C	
400-151461-6	GWA-3A	Total/NA	Water	SM 2540C	
400-151461-7	GWA-5	Total/NA	Water	SM 2540C	
MB 400-391989/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

General Chemistry (Continued)

Analysis Batch: 391989 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-391989/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151390-C-4 DU	Duplicate	Total/NA	Water	SM 2540C	
400-151390-C-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 392521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-13	DUP-01	Total/NA	Water	SM 2540C	
400-151461-14	DUP-02	Total/NA	Water	SM 2540C	
MB 400-392521/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-392521/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151138-B-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 392529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-8	GWA-3B	Total/NA	Water	SM 2540C	
400-151461-9	GWC-1	Total/NA	Water	SM 2540C	
400-151461-10	GWC-3	Total/NA	Water	SM 2540C	
400-151461-11	GWA-7	Total/NA	Water	SM 2540C	
400-151461-12	GWC-5	Total/NA	Water	SM 2540C	
400-151461-15	FERB-02	Total/NA	Water	SM 2540C	
400-151461-16	GWC-4A	Total/NA	Water	SM 2540C	
MB 400-392529/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-392529/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151439-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 392678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-17	GWC-6	Total/NA	Water	SM 2540C	
400-151461-18	GWC-2	Total/NA	Water	SM 2540C	
400-151461-19	FB-03	Total/NA	Water	SM 2540C	
MB 400-392678/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-392678/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-151461-17 DU	GWC-6	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-393088/4
Matrix: Water
Analysis Batch: 393088

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			04/07/18 07:59	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 07:59	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 07:59	1

Lab Sample ID: LCS 400-393088/5
Matrix: Water
Analysis Batch: 393088

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	9.47		mg/L		95	90 - 110
Fluoride	10.0	10.0		mg/L		100	90 - 110
Sulfate	10.0	9.88		mg/L		99	90 - 110

Lab Sample ID: LCSD 400-393088/6
Matrix: Water
Analysis Batch: 393088

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	9.47		mg/L		95	90 - 110	0	15
Fluoride	10.0	9.99		mg/L		100	90 - 110	0	15
Sulfate	10.0	9.86		mg/L		99	90 - 110	0	15

Lab Sample ID: 400-151428-A-23 MS
Matrix: Water
Analysis Batch: 393088

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	6.0		10.0	15.7		mg/L		97	80 - 120
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120
Sulfate	67	E	10.0	76.7	E 4	mg/L		102	80 - 120

Lab Sample ID: 400-151428-A-23 MSD
Matrix: Water
Analysis Batch: 393088

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.0		10.0	15.7		mg/L		96	80 - 120	0	20
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120	1	20
Sulfate	67	E	10.0	76.6	E 4	mg/L		100	80 - 120	0	20

Lab Sample ID: MB 400-393176/4
Matrix: Water
Analysis Batch: 393176

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			04/07/18 23:58	1
Fluoride	<0.082		0.20	0.082	mg/L			04/07/18 23:58	1
Sulfate	<0.70		1.0	0.70	mg/L			04/07/18 23:58	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-393176/5
Matrix: Water
Analysis Batch: 393176

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	9.47		mg/L		95	90 - 110
Fluoride	10.0	9.99		mg/L		100	90 - 110
Sulfate	10.0	9.73		mg/L		97	90 - 110

Lab Sample ID: LCSD 400-393176/6
Matrix: Water
Analysis Batch: 393176

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	9.45		mg/L		95	90 - 110	0	15
Fluoride	10.0	9.86		mg/L		99	90 - 110	1	15
Sulfate	10.0	9.70		mg/L		97	90 - 110	0	15

Lab Sample ID: 400-151461-10 MS
Matrix: Water
Analysis Batch: 393176

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10	F1	10.0	17.8	F1	mg/L		78	80 - 120
Fluoride	<0.082		10.0	8.39		mg/L		84	80 - 120
Sulfate	<0.70		10.0	8.37		mg/L		84	80 - 120

Lab Sample ID: 400-151461-10 MSD
Matrix: Water
Analysis Batch: 393176

Client Sample ID: GWC-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	10	F1	10.0	17.8	F1	mg/L		79	80 - 120	0	20
Fluoride	<0.082		10.0	8.43		mg/L		84	80 - 120	0	20
Sulfate	<0.70		10.0	8.50		mg/L		85	80 - 120	2	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-393092/1-A ^5
Matrix: Water
Analysis Batch: 393503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 393092

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/07/18 11:50	04/10/18 16:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/07/18 11:50	04/10/18 16:41	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/07/18 11:50	04/10/18 16:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 16:41	5
Boron	<0.021		0.050	0.021	mg/L		04/07/18 11:50	04/10/18 16:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/07/18 11:50	04/10/18 16:41	5
Calcium	<0.13		0.25	0.13	mg/L		04/07/18 11:50	04/10/18 16:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/07/18 11:50	04/10/18 16:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/07/18 11:50	04/10/18 16:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/07/18 11:50	04/10/18 16:41	5
Lithium	0.00139	J	0.0050	0.0011	mg/L		04/07/18 11:50	04/10/18 16:41	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-393092/1-A ^5
Matrix: Water
Analysis Batch: 393503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 393092

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/07/18 11:50	04/10/18 16:41	5
Selenium	0.000765	J	0.0013	0.00024	mg/L		04/07/18 11:50	04/10/18 16:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/07/18 11:50	04/10/18 16:41	5

Lab Sample ID: LCS 400-393092/2-A
Matrix: Water
Analysis Batch: 393503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 393092

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0520		mg/L		104	80 - 120
Arsenic	0.0500	0.0503		mg/L		101	80 - 120
Barium	0.0500	0.0517		mg/L		103	80 - 120
Beryllium	0.0500	0.0506		mg/L		101	80 - 120
Boron	0.100	0.0983		mg/L		98	80 - 120
Cadmium	0.0500	0.0506		mg/L		101	80 - 120
Calcium	5.00	5.13		mg/L		103	80 - 120
Chromium	0.0500	0.0520		mg/L		104	80 - 120
Cobalt	0.0500	0.0523		mg/L		105	80 - 120
Lead	0.0500	0.0501		mg/L		100	80 - 120
Lithium	0.0500	0.0484		mg/L		97	80 - 120
Molybdenum	0.0500	0.0505		mg/L		101	80 - 120
Selenium	0.0500	0.0501		mg/L		100	80 - 120
Thallium	0.0100	0.00992		mg/L		99	80 - 120

Lab Sample ID: 400-151461-1 MS
Matrix: Water
Analysis Batch: 393503

Client Sample ID: GWA-1A
Prep Type: Total Recoverable
Prep Batch: 393092

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0529		mg/L		106	75 - 125
Arsenic	<0.00046		0.0500	0.0501		mg/L		100	75 - 125
Barium	0.023		0.0500	0.0741		mg/L		101	75 - 125
Beryllium	<0.00034		0.0500	0.0498		mg/L		100	75 - 125
Boron	<0.021		0.100	0.108		mg/L		108	75 - 125
Cadmium	<0.00034		0.0500	0.0504		mg/L		101	75 - 125
Calcium	1.7		5.00	6.86		mg/L		104	75 - 125
Chromium	0.0044		0.0500	0.0572		mg/L		106	75 - 125
Cobalt	<0.00040		0.0500	0.0545		mg/L		109	75 - 125
Lead	<0.00035		0.0500	0.0485		mg/L		97	75 - 125
Lithium	0.012	B F1	0.0500	0.0754	F1	mg/L		127	75 - 125
Molybdenum	<0.00085		0.0500	0.0476		mg/L		95	75 - 125
Selenium	0.0014	B	0.0500	0.0517		mg/L		101	75 - 125
Thallium	<0.000085		0.0100	0.00985		mg/L		98	75 - 125

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-151461-1 MSD
Matrix: Water
Analysis Batch: 393503

Client Sample ID: GWA-1A
Prep Type: Total Recoverable
Prep Batch: 393092

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0516		mg/L		103	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0501		mg/L		100	75 - 125	0	20
Barium	0.023		0.0500	0.0738		mg/L		101	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125	1	20
Boron	<0.021		0.100	0.109		mg/L		109	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0508		mg/L		102	75 - 125	1	20
Calcium	1.7		5.00	6.92		mg/L		105	75 - 125	1	20
Chromium	0.0044		0.0500	0.0572		mg/L		106	75 - 125	0	20
Cobalt	<0.00040		0.0500	0.0541		mg/L		108	75 - 125	1	20
Lead	<0.00035		0.0500	0.0481		mg/L		96	75 - 125	1	20
Lithium	0.012	B F1	0.0500	0.0758	F1	mg/L		127	75 - 125	1	20
Molybdenum	<0.00085		0.0500	0.0487		mg/L		97	75 - 125	2	20
Selenium	0.0014	B	0.0500	0.0493		mg/L		96	75 - 125	5	20
Thallium	<0.00085		0.0100	0.0102		mg/L		102	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-393570/14-A
Matrix: Water
Analysis Batch: 393751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/11/18 14:50	04/12/18 11:12	1

Lab Sample ID: LCS 400-393570/15-A
Matrix: Water
Analysis Batch: 393751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00100		mg/L		100	80 - 120

Lab Sample ID: 400-151461-2 MS
Matrix: Water
Analysis Batch: 393751

Client Sample ID: GWA-2A
Prep Type: Total/NA
Prep Batch: 393570

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00200		mg/L		99	80 - 120

Lab Sample ID: 400-151461-2 MSD
Matrix: Water
Analysis Batch: 393751

Client Sample ID: GWA-2A
Prep Type: Total/NA
Prep Batch: 393570

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00183		mg/L		91	80 - 120	9	20

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
SDG: Ash Landfill 3

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-391989/1
Matrix: Water
Analysis Batch: 391989

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/29/18 13:18	1

Lab Sample ID: LCS 400-391989/2
Matrix: Water
Analysis Batch: 391989

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: 400-151390-C-4 DU
Matrix: Water
Analysis Batch: 391989

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	130		126		mg/L		0	5

Lab Sample ID: 400-151390-C-5 DU
Matrix: Water
Analysis Batch: 391989

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	300		300		mg/L		0	5

Lab Sample ID: MB 400-392521/1
Matrix: Water
Analysis Batch: 392521

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			04/03/18 16:48	1

Lab Sample ID: LCS 400-392521/2
Matrix: Water
Analysis Batch: 392521

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: 400-151138-B-5 DU
Matrix: Water
Analysis Batch: 392521

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 400-392529/1
Matrix: Water
Analysis Batch: 392529

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			04/03/18 13:23	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

Lab Sample ID: LCS 400-392529/2
Matrix: Water
Analysis Batch: 392529

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: 400-151439-B-2 DU
Matrix: Water
Analysis Batch: 392529

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	130		126		mg/L		2	5

Lab Sample ID: MB 400-392678/1
Matrix: Water
Analysis Batch: 392678

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			04/04/18 17:07	1

Lab Sample ID: LCS 400-392678/2
Matrix: Water
Analysis Batch: 392678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	290		mg/L		99	78 - 122

Lab Sample ID: 400-151461-17 DU
Matrix: Water
Analysis Batch: 392678

Client Sample ID: GWC-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	78		76.0		mg/L		3	5

Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #: 40007700 Project #: 40007700 SSOW#:		Analysis Requested 9316_Ra226, 9320_Ra228, Ra228Ra228_GFPc 300_ORGFM_28D - Chloride, Fluoride & Sulfate, 2540C - TDS 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Te, 7470A-Hg	
Sample Identification GWA-1A GWA-2A GWA-4 FB-01 FERB-01 GWA-3A GWA-5		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 300_ORGFM_28D - Chloride, Fluoride & Sulfate, 2540C - TDS 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Te, 7470A-Hg	
Sample Date 3/27/18 ↓ 3/27/18		Total Number of Containers 3 3 3 3 3 3 3	
Sample Time 12:35 12:50 15:30 14:13 17:25 17:25 17:50		Special Instructions/Note: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - NaHSO4 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:	
Sample Type (C=comp, G=grab) G G G G G G G		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - NaHSO4 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) 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		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <i>Bud Smith</i> Date/Time: 3/27/18 19:15 Company: GFI		Received by: <i>FEDER</i> Date/Time: Company:	
Relinquished by: Date/Time: Company:		Received by: Date/Time: Company:	
Relinquished by: Date/Time: Company:		Received by: Date/Time: 3-28-18 9:49 Company:	
Custody Seals Intact: Δ Yes Δ No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.0°C, 0.5°C 188	

Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		Lab PM: Whitmire, Chyenme R E-Mail: chyenme.whitmire@testamericainc.com Carrier Tracking No(s): Lab No: _____ Page: Page 1 of 1 Job #: _____	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #: _____ Project #: 40007700 SSO#: _____		Analysis Requested 5020-Sp,As,Ba,B,Ca,Cd,Cr,Cu,Pb,LI,Mo,Se,Te,Tl,7470A-Hg TDS 300_ORGM_28D - Chloride, Fluoride & Sulfate, 2540C - 9316_Ra226, 9320_Ra228, Ra226Ra228_GFPCC Perform MS/MSD (Yes or No)	
Sample Identification Sample Date: 3/28/18 Sample Time: 10:20 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=soil, A=air) Preservation Code: W		Total Number of containers: _____ Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____ M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Date: 3/28/18 Sample Time: 14:05 Sample Type: G Matrix: W Preservation Code: W		Special Instructions/Note: _____	
Sample Date: 3/28/18 Sample Time: 16:10 Sample Type: G Matrix: W Preservation Code: W		Special Instructions/Note: _____	
Sample Date: 3/28/18 Sample Time: 13:40 Sample Type: G Matrix: W Preservation Code: W		Special Instructions/Note: _____	
Sample Date: 3/28/18 Sample Time: 16:00 Sample Type: G Matrix: W Preservation Code: W		Special Instructions/Note: _____	
Sample Date: 3/28/18 Sample Time: 16:25 Sample Type: G Matrix: W Preservation Code: W		Special Instructions/Note: _____	
Sample Date: 3/28/18 Sample Time: 15:08 Sample Type: G Matrix: W Preservation Code: W		Special Instructions/Note: _____	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: Peter Adams Date/Time: 3/28/18 19:10 Company: GEI Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 3.92, 1.02, 1.02			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-151461-1

SDG Number: Ash Landfill 3

Login Number: 151461

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	0.3°C IR-8
Cooler Temperature is recorded.	True	2.0°C, 0.5°C IR-8, 0.4°C, 1.0°C IR-8, 1.6°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-1
 SDG: Ash Landfill 3

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
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
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	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
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	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
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

* 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: 400-151461-2

TestAmerica Sample Delivery Group: Ash Landfill 3

Client Project/Site: CCR - Plant McIntosh

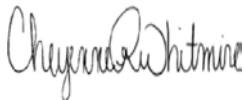
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

4/30/2018 11:30:56 AM

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	25
Chronicle	26
QC Association	31
QC Sample Results	32
Chain of Custody	34
Receipt Checklists	37
Certification Summary	40

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Job ID: 400-151461-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-151461-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-358512: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-1A (400-151461-1), GWA-2A (400-151461-2), GWA-4 (400-151461-3), FB-01 (400-151461-4), FERB-01 (400-151461-5), GWA-3A (400-151461-6), GWA-5 (400-151461-7), GWA-3B (400-151461-8), GWC-1 (400-151461-9), GWC-3 (400-151461-10), GWA-7 (400-151461-11), GWC-5 (400-151461-12), DUP-01 (400-151461-13), DUP-02 (400-151461-14), FERB-02 (400-151461-15), GWC-4A (400-151461-16), GWC-6 (400-151461-17), GWC-2 (400-151461-18) and FB-03 (400-151461-19). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-358507: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-1A (400-151461-1), GWA-2A (400-151461-2), GWA-4 (400-151461-3), FB-01 (400-151461-4), FERB-01 (400-151461-5), GWA-3A (400-151461-6), GWA-5 (400-151461-7), GWA-3B (400-151461-8), GWC-1 (400-151461-9), GWC-3 (400-151461-10), GWA-7 (400-151461-11), GWC-5 (400-151461-12), DUP-01 (400-151461-13), DUP-02 (400-151461-14), FERB-02 (400-151461-15), GWC-4A (400-151461-16), GWC-6 (400-151461-17), GWC-2 (400-151461-18) and FB-03 (400-151461-19). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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: 400-151461-2
SDG: Ash Landfill 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-151461-1	GWA-1A	Water	03/27/18 12:35	03/28/18 09:44
400-151461-2	GWA-2A	Water	03/27/18 12:50	03/28/18 09:44
400-151461-3	GWA-4	Water	03/27/18 15:30	03/28/18 09:44
400-151461-4	FB-01	Water	03/27/18 14:13	03/28/18 09:44
400-151461-5	FERB-01	Water	03/27/18 17:25	03/28/18 09:44
400-151461-6	GWA-3A	Water	03/27/18 17:25	03/28/18 09:44
400-151461-7	GWA-5	Water	03/27/18 17:50	03/28/18 09:44
400-151461-8	GWA-3B	Water	03/28/18 10:20	03/29/18 10:20
400-151461-9	GWC-1	Water	03/28/18 14:05	03/30/18 11:14
400-151461-10	GWC-3	Water	03/28/18 16:10	03/29/18 10:20
400-151461-11	GWA-7	Water	03/28/18 13:40	03/29/18 10:20
400-151461-12	GWC-5	Water	03/28/18 16:00	03/29/18 10:20
400-151461-13	DUP-01	Water	03/28/18 00:00	03/30/18 11:14
400-151461-14	DUP-02	Water	03/28/18 00:00	03/29/18 10:20
400-151461-15	FERB-02	Water	03/28/18 16:25	03/30/18 11:14
400-151461-16	GWC-4A	Water	03/28/18 15:08	03/29/18 10:20
400-151461-17	GWC-6	Water	03/29/18 08:20	03/30/18 11:14
400-151461-18	GWC-2	Water	03/29/18 10:58	03/30/18 11:14
400-151461-19	FB-03	Water	03/29/18 14:00	03/30/18 11:14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-151461-1

Date Collected: 03/27/18 12:35

Matrix: Water

Date Received: 03/28/18 09:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.203		0.0753	0.0775	1.00	0.0632	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.11		0.315	0.331	1.00	0.411	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	94.2		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.31		0.324	0.340	5.00	0.411	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-151461-2

Date Collected: 03/27/18 12:50

Matrix: Water

Date Received: 03/28/18 09:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.267		0.0879	0.0911	1.00	0.0765	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.35		0.325	0.348	1.00	0.396	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	93.1		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.61		0.337	0.360	5.00	0.396	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWA-4
Date Collected: 03/27/18 15:30
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-3
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	0.245		0.0835	0.0864	1.00	0.0696	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.09		0.293	0.310	1.00	0.364	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	94.2		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.34		0.305	0.322	5.00	0.364	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: FB-01
Date Collected: 03/27/18 14:13
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-4
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	0.0268	U	0.0426	0.0427	1.00	0.0745	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.809		0.303	0.312	1.00	0.420	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	90.8		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.836		0.306	0.315	5.00	0.420	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: FERB-01

Lab Sample ID: 400-151461-5

Date Collected: 03/27/18 17:25

Matrix: Water

Date Received: 03/28/18 09:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00984	U	0.0368	0.0368	1.00	0.0842	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.438		0.234	0.237	1.00	0.346	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	95.7		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.428		0.237	0.240	5.00	0.346	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWA-3A

Lab Sample ID: 400-151461-6

Date Collected: 03/27/18 17:25

Matrix: Water

Date Received: 03/28/18 09:44

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.274		0.0892	0.0926	1.00	0.0761	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.14		0.293	0.311	1.00	0.354	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	93.1		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.41		0.306	0.324	5.00	0.354	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWA-5
Date Collected: 03/27/18 17:50
Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-7
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	0.727		0.136	0.151	1.00	0.0745	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.04		0.350	0.397	1.00	0.354	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	92.0		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.77		0.375	0.425	5.00	0.354	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWA-3B
Date Collected: 03/28/18 10:20
Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-8
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	0.223		0.0802	0.0827	1.00	0.0735	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.04		0.267	0.283	1.00	0.315	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	94.6		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.279	0.295	5.00	0.315	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWC-1
Date Collected: 03/28/18 14:05
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-9
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	0.111		0.0649	0.0657	1.00	0.0821	pCi/L	04/02/18 12:45	04/24/18 19:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					04/02/18 12:45	04/24/18 19:46	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.881		0.291	0.302	1.00	0.385	pCi/L	04/02/18 13:01	04/10/18 15:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					04/02/18 13:01	04/10/18 15:29	1
Y Carrier	92.7		40 - 110					04/02/18 13:01	04/10/18 15:29	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.992		0.298	0.309	5.00	0.385	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWC-3

Date Collected: 03/28/18 16:10

Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-10

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	0.261		0.0852	0.0884	1.00	0.0689	pCi/L	04/02/18 12:45	04/24/18 19:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 12:45	04/24/18 19:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.355		0.224	0.226	1.00	0.342	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	95.0		40 - 110					04/02/18 13:01	04/10/18 15:30	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	0.616		0.240	0.243	5.00	0.342	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWA-7
Date Collected: 03/28/18 13:40
Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-11
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	0.110		0.0663	0.0670	1.00	0.0840	pCi/L	04/02/18 12:45	04/24/18 19:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					04/02/18 12:45	04/24/18 19:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.732		0.266	0.274	1.00	0.354	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	93.1		40 - 110					04/02/18 13:01	04/10/18 15:30	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	0.841		0.274	0.282	5.00	0.354	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWC-5

Date Collected: 03/28/18 16:00

Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-12

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.83		0.262	0.365	1.00	0.0646	pCi/L	04/02/18 12:45	04/24/18 19:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 12:45	04/24/18 19:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.35		0.401	0.506	1.00	0.307	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	95.0		40 - 110					04/02/18 13:01	04/10/18 15:30	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	6.18		0.479	0.624	5.00	0.307	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: DUP-01
Date Collected: 03/28/18 00:00
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-13
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	0.148		0.0727	0.0739	1.00	0.0859	pCi/L	04/02/18 12:45	04/24/18 19:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 12:45	04/24/18 19:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.968		0.286	0.299	1.00	0.369	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	93.8		40 - 110					04/02/18 13:01	04/10/18 15:30	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	1.12		0.295	0.308	5.00	0.369	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: DUP-02

Date Collected: 03/28/18 00:00

Date Received: 03/29/18 10:20

Lab Sample ID: 400-151461-14

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	0.282		0.0865	0.0901	1.00	0.0625	pCi/L	04/02/18 12:45	04/24/18 19:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					04/02/18 12:45	04/24/18 19:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.560		0.235	0.241	1.00	0.330	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	94.6		40 - 110					04/02/18 13:01	04/10/18 15:30	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	0.842		0.250	0.257	5.00	0.330	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: FERB-02

Date Collected: 03/28/18 16:25

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-15

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	0.00116	U	0.0242	0.0242	1.00	0.0563	pCi/L	04/02/18 12:45	04/24/18 19:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					04/02/18 12:45	04/24/18 19:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.488		0.221	0.226	1.00	0.311	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	95.3		40 - 110					04/02/18 13:01	04/10/18 15:30	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	0.489		0.222	0.227	5.00	0.311	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWC-4A

Lab Sample ID: 400-151461-16

Date Collected: 03/28/18 15:08

Matrix: Water

Date Received: 03/29/18 10:20

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.433		0.106	0.113	1.00	0.0591	pCi/L	04/02/18 12:45	04/24/18 19:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 12:45	04/24/18 19:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.704		0.248	0.257	1.00	0.329	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	93.8		40 - 110					04/02/18 13:01	04/10/18 15:30	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	1.14		0.270	0.281	5.00	0.329	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWC-6
Date Collected: 03/29/18 08:20
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-17
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	0.0911		0.0546	0.0552	1.00	0.0642	pCi/L	04/02/18 12:45	04/24/18 19:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 12:45	04/24/18 19:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.642		0.262	0.269	1.00	0.371	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	95.0		40 - 110					04/02/18 13:01	04/10/18 15:30	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	0.733		0.268	0.275	5.00	0.371	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Client Sample ID: GWC-2
Date Collected: 03/29/18 10:58
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-18
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	0.283		0.0861	0.0898	1.00	0.0631	pCi/L	04/02/18 12:45	04/24/18 19:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					04/02/18 12:45	04/24/18 19:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.01		0.297	0.312	1.00	0.397	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	93.5		40 - 110					04/02/18 13:01	04/10/18 15:30	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	1.29		0.309	0.325	5.00	0.397	pCi/L		04/26/18 18:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: FB-03
Date Collected: 03/29/18 14:00
Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-19
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	0.0311	U	0.0352	0.0353	1.00	0.0542	pCi/L	04/02/18 12:45	04/24/18 19:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 12:45	04/24/18 19:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.503		0.230	0.234	1.00	0.328	pCi/L	04/02/18 13:01	04/10/18 15:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/02/18 13:01	04/10/18 15:30	1
Y Carrier	95.0		40 - 110					04/02/18 13:01	04/10/18 15:30	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	0.534		0.233	0.237	5.00	0.328	pCi/L		04/26/18 18:05	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWA-1A

Date Collected: 03/27/18 12:35

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWA-2A

Date Collected: 03/27/18 12:50

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWA-4

Date Collected: 03/27/18 15:30

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: FB-01

Date Collected: 03/27/18 14:13

Date Received: 03/28/18 09:44

Lab Sample ID: 400-151461-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: FERB-01

Lab Sample ID: 400-151461-5

Date Collected: 03/27/18 17:25

Matrix: Water

Date Received: 03/28/18 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWA-3A

Lab Sample ID: 400-151461-6

Date Collected: 03/27/18 17:25

Matrix: Water

Date Received: 03/28/18 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWA-5

Lab Sample ID: 400-151461-7

Date Collected: 03/27/18 17:50

Matrix: Water

Date Received: 03/28/18 09:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWA-3B

Lab Sample ID: 400-151461-8

Date Collected: 03/28/18 10:20

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWC-1

Lab Sample ID: 400-151461-9

Date Collected: 03/28/18 14:05

Matrix: Water

Date Received: 03/30/18 11:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:46	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWC-3

Lab Sample ID: 400-151461-10

Date Collected: 03/28/18 16:10

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:47	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWA-7

Lab Sample ID: 400-151461-11

Date Collected: 03/28/18 13:40

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:47	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWC-5

Lab Sample ID: 400-151461-12

Date Collected: 03/28/18 16:00

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362310	04/24/18 19:47	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: DUP-01

Lab Sample ID: 400-151461-13

Date Collected: 03/28/18 00:00

Matrix: Water

Date Received: 03/30/18 11:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:48	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-151461-14

Date Collected: 03/28/18 00:00

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:48	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: FERB-02

Lab Sample ID: 400-151461-15

Date Collected: 03/28/18 16:25

Matrix: Water

Date Received: 03/30/18 11:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:48	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWC-4A

Lab Sample ID: 400-151461-16

Date Collected: 03/28/18 15:08

Matrix: Water

Date Received: 03/29/18 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:48	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Client Sample ID: GWC-6

Date Collected: 03/29/18 08:20

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: GWC-2

Date Collected: 03/29/18 10:58

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	RTM	TAL SL

Client Sample ID: FB-03

Date Collected: 03/29/18 14:00

Date Received: 03/30/18 11:14

Lab Sample ID: 400-151461-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			358507	04/02/18 12:45	TJT	TAL SL
Total/NA	Analysis	9315		1	362308	04/24/18 19:49	CDR	TAL SL
Total/NA	Prep	PrecSep_0			358512	04/02/18 13:01	TJT	TAL SL
Total/NA	Analysis	9320		1	359781	04/10/18 15:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	362952	04/26/18 18:05	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: 400-151461-2
 SDG: Ash Landfill 3

Rad

Prep Batch: 358507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total/NA	Water	PrecSep-21	
400-151461-2	GWA-2A	Total/NA	Water	PrecSep-21	
400-151461-3	GWA-4	Total/NA	Water	PrecSep-21	
400-151461-4	FB-01	Total/NA	Water	PrecSep-21	
400-151461-5	FERB-01	Total/NA	Water	PrecSep-21	
400-151461-6	GWA-3A	Total/NA	Water	PrecSep-21	
400-151461-7	GWA-5	Total/NA	Water	PrecSep-21	
400-151461-8	GWA-3B	Total/NA	Water	PrecSep-21	
400-151461-9	GWC-1	Total/NA	Water	PrecSep-21	
400-151461-10	GWC-3	Total/NA	Water	PrecSep-21	
400-151461-11	GWA-7	Total/NA	Water	PrecSep-21	
400-151461-12	GWC-5	Total/NA	Water	PrecSep-21	
400-151461-13	DUP-01	Total/NA	Water	PrecSep-21	
400-151461-14	DUP-02	Total/NA	Water	PrecSep-21	
400-151461-15	FERB-02	Total/NA	Water	PrecSep-21	
400-151461-16	GWC-4A	Total/NA	Water	PrecSep-21	
400-151461-17	GWC-6	Total/NA	Water	PrecSep-21	
400-151461-18	GWC-2	Total/NA	Water	PrecSep-21	
400-151461-19	FB-03	Total/NA	Water	PrecSep-21	
MB 160-358507/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-358507/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-358507/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 358512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-151461-1	GWA-1A	Total/NA	Water	PrecSep_0	
400-151461-2	GWA-2A	Total/NA	Water	PrecSep_0	
400-151461-3	GWA-4	Total/NA	Water	PrecSep_0	
400-151461-4	FB-01	Total/NA	Water	PrecSep_0	
400-151461-5	FERB-01	Total/NA	Water	PrecSep_0	
400-151461-6	GWA-3A	Total/NA	Water	PrecSep_0	
400-151461-7	GWA-5	Total/NA	Water	PrecSep_0	
400-151461-8	GWA-3B	Total/NA	Water	PrecSep_0	
400-151461-9	GWC-1	Total/NA	Water	PrecSep_0	
400-151461-10	GWC-3	Total/NA	Water	PrecSep_0	
400-151461-11	GWA-7	Total/NA	Water	PrecSep_0	
400-151461-12	GWC-5	Total/NA	Water	PrecSep_0	
400-151461-13	DUP-01	Total/NA	Water	PrecSep_0	
400-151461-14	DUP-02	Total/NA	Water	PrecSep_0	
400-151461-15	FERB-02	Total/NA	Water	PrecSep_0	
400-151461-16	GWC-4A	Total/NA	Water	PrecSep_0	
400-151461-17	GWC-6	Total/NA	Water	PrecSep_0	
400-151461-18	GWC-2	Total/NA	Water	PrecSep_0	
400-151461-19	FB-03	Total/NA	Water	PrecSep_0	
MB 160-358512/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-358512/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-358512/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-358507/22-A
Matrix: Water
Analysis Batch: 362308

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358507

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02126	U	0.0329	0.0330	1.00	0.0574	pCi/L	04/02/18 12:45	04/24/18 19:49	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 12:45	04/24/18 19:49	1

Lab Sample ID: LCS 160-358507/1-A
Matrix: Water
Analysis Batch: 362310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358507

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	10.62		1.09	1.00	0.0902	pCi/L	90	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	99.7		40 - 110						

Lab Sample ID: LCSD 160-358507/2-A
Matrix: Water
Analysis Batch: 362310

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358507

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.8	10.13		1.04	1.00	0.0728	pCi/L	86	68 - 137	0.23	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	99.1		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-358512/22-A
Matrix: Water
Analysis Batch: 359781

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 358512

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4696		0.228	0.232	1.00	0.329	pCi/L	04/02/18 13:01	04/10/18 15:31	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/02/18 13:01	04/10/18 15:31	1
Y Carrier	94.6		40 - 110					04/02/18 13:01	04/10/18 15:31	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
 SDG: Ash Landfill 3

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-358512/1-A
Matrix: Water
Analysis Batch: 359781

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 358512

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.41	8.439		1.00	1.00	0.395	pCi/L	100	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	99.7		40 - 110
Y Carrier	90.8		40 - 110

Lab Sample ID: LCSD 160-358512/2-A
Matrix: Water
Analysis Batch: 359781

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 358512

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	8.41	8.496		1.00	1.00	0.369	pCi/L	101	56 - 140	0.03	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	99.1		40 - 110
Y Carrier	93.1		40 - 110

Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #: 40007700 Project #: 40007700 SSOW#:		Analysis Requested 9316 Ra226, 9320 Ra228, Ra228Ra228 GFCP 300 ORGFM_28D - Chloride, Fluoride & Sulfate, 2540C - TDS 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Li,Mo,Se,Te, 7470A-Hg	
Sample Identification GWA-1A GWA-2A GWA-4 FB-01 FERB-01 GWA-3A GWA-5		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 3016 Ra226, 9320 Ra228, Ra228Ra228 GFCP 300 ORGFM_28D - Chloride, Fluoride & Sulfate, 2540C - TDS 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Li,Mo,Se,Te, 7470A-Hg	
Sample Date 3/27/18 ↓ 3/27/18		Sample Time 12:35 12:50 15:30 14:13 17:25 17:25 17:50	
Sample Type (C=comp, G=grab) G G G G G G G		Matrix (W=water, S=solid, O=soil, D=dust, A=air) W W W W W W W	
Preservation Code: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
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: Total Number of containers: 3, 3, 3, 3, 3, 3, 3	
Deliverable Requested: <input type="checkbox"/> I, <input type="checkbox"/> II, <input type="checkbox"/> III, <input type="checkbox"/> 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:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 3/27/18 19:15 Company: GFI		Received by: [Signature] Date/Time: 3-28-18 9:49 Company:	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 2.0°C, 0.5°C 188	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-151461-2

SDG Number: Ash Landfill 3

Login Number: 151461

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	0.3°C IR-8
Cooler Temperature is recorded.	True	2.0°C, 0.5°C IR-8, 0.4°C, 1.0°C IR-8, 1.6°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-151461-2

SDG Number: Ash Landfill 3

Login Number: 151461

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/30/18 01:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	22.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-151461-2

SDG Number: Ash Landfill 3

Login Number: 151461

List Number: 3

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/31/18 09:57 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	22.0,22.0,22.0,22.0,22.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

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
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
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	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
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	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18 *
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18 *
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-151461-2
SDG: Ash Landfill 3

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
New Jersey	NELAP	2	MO002	06-30-18 *
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18 *
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

* 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: 400-156081-2

TestAmerica SDG: Ash Landfill #3 - Background

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/20/2018 11:36:31 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	10
Sample Summary	11
Client Sample Results	12
Definitions	50
Chronicle	51
QC Association	59
QC Sample Results	65
Chain of Custody	76
Receipt Checklists	80
Certification Summary	83

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Job ID: 400-156081-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-156081-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-375099: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: FB-01 (400-156081-1), FERB-01 (400-156081-2) and GWA-1 (400-156081-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-375784: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-1A (400-156081-4), GWA-2A (400-156081-5), GWA-3A (400-156081-6), GWA-3B (400-156081-7), GWA-7 (400-156081-8), GWA-7-FILTERED (400-156081-9), GWA-4 (400-156081-10), GWA-5 (400-156081-11), GWC-2 (400-156081-12), GWC-4A (400-156081-13), DUP-01 (400-156081-14), DUP-02 (400-156081-15) and GWC-3 (400-156081-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-375784: Sample aliquot reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur. DUP-01 (400-156081-14)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-376526: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWC-6 (400-156081-17), GWC-5 (400-156081-18), GWC-1 (400-156081-19) and FB-02 (400-156081-20). 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 160-375093: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: FB-01 (400-156081-1), FERB-01 (400-156081-2) and GWA-1 (400-156081-3). 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 160-375777: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-1A (400-156081-4), GWA-2A (400-156081-5), GWA-3A (400-156081-6), GWA-3B (400-156081-7), GWA-7 (400-156081-8), GWA-7-FILTERED (400-156081-9), GWA-4 (400-156081-10), GWA-5 (400-156081-11), GWC-2 (400-156081-12), GWC-4A (400-156081-13), DUP-01 (400-156081-14), DUP-02 (400-156081-15) and GWC-3 (400-156081-16). 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 160-375777: Sample aliquot reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur. DUP-01 (400-156081-14)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-376513: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWC-6 (400-156081-17), GWC-5 (400-156081-18), GWC-1 (400-156081-19) and FB-02 (400-156081-20). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Metals

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 404611 and analytical batch 404947 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 7470A: The method blank for preparation batch 405609 and analytical batch 405954 contained Mercury 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.

Per client GWA-1 was canceled.

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: FB-01

Lab Sample ID: 400-156081-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00042	J	0.0013	0.00024	mg/L	5		6020	Total
Mercury	0.000078	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA

Client Sample ID: FERB-01

Lab Sample ID: 400-156081-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000078	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: GWA-1A

Lab Sample ID: 400-156081-4

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
Arsenic	0.00055	J	0.0013	0.00046	mg/L	5		6020	Total
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Calcium	1.7		0.25	0.13	mg/L	5		6020	Recoverable Total
Chromium	0.0045		0.0025	0.0011	mg/L	5		6020	Recoverable Total
Lithium	0.0099		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Molybdenum	0.00098	J	0.015	0.00085	mg/L	5		6020	Total
Selenium	0.0021		0.0013	0.00024	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	90		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-156081-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total
Calcium	3.4		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Lithium	0.0097		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Selenium	0.0010	J	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: GWA-3A

Lab Sample ID: 400-156081-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.056		0.0025	0.00049	mg/L	5		6020	Total
Beryllium	0.00038	J	0.0025	0.00034	mg/L	5		6020	Recoverable Total

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-3A (Continued)

Lab Sample ID: 400-156081-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0022	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
Lithium	0.0032	J	0.0050	0.0011	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-3B

Lab Sample ID: 400-156081-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.0		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	0.078		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00053	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0014	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7

Lab Sample ID: 400-156081-8

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
Barium	0.026		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0095		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00066	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0013		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.026		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

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
Barium	0.016		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: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-7-FILTERED (Continued)

Lab Sample ID: 400-156081-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0065		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0095		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.026		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4

Lab Sample ID: 400-156081-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.99		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00086	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0011	J	0.0050	0.0011	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: 400-156081-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	19		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00067	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.042	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0015	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00045	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0012	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-2

Lab Sample ID: 400-156081-12

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	0.073		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: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-2 (Continued)

Lab Sample ID: 400-156081-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.044	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00097	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0023	J	0.0050	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-4A

Lab Sample ID: 400-156081-13

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	0.76	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.065		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0029		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00084	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0070		0.0050	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: DUP-01

Lab Sample ID: 400-156081-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.8		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.079		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	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00047	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0014	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-156081-15

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
Total Dissolved Solids	78		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: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-3

Lab Sample ID: 400-156081-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.9		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	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0035		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00053	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0097		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	56		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-156081-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.78	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		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	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00037	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0092		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-5

Lab Sample ID: 400-156081-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.4		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	26		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00074	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.64		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00043	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	9.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.011		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0044	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0083	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0077		0.0013	0.00024	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: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-5 (Continued)

Lab Sample ID: 400-156081-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.00050		0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00015	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	290		25	17	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-156081-19

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
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.18	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0011	J	0.0050	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-02

Lab Sample ID: 400-156081-20

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: 400-156081-2
 SDG: Ash Landfill #3 - Background

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
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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-156081-1	FB-01	Water	07/09/18 17:15	07/10/18 09:13
400-156081-2	FERB-01	Water	07/09/18 17:35	07/10/18 09:13
400-156081-4	GWA-1A	Water	07/10/18 09:40	07/11/18 09:21
400-156081-5	GWA-2A	Water	07/10/18 10:15	07/11/18 09:21
400-156081-6	GWA-3A	Water	07/10/18 10:28	07/11/18 09:21
400-156081-7	GWA-3B	Water	07/10/18 11:57	07/11/18 09:21
400-156081-8	GWA-7	Water	07/10/18 12:15	07/11/18 09:21
400-156081-9	GWA-7-FILTERED	Water	07/10/18 12:35	07/11/18 09:21
400-156081-10	GWA-4	Water	07/10/18 13:25	07/11/18 09:21
400-156081-11	GWA-5	Water	07/10/18 14:27	07/11/18 09:21
400-156081-12	GWC-2	Water	07/10/18 15:55	07/11/18 09:21
400-156081-13	GWC-4A	Water	07/10/18 15:55	07/11/18 09:21
400-156081-14	DUP-01	Water	07/10/18 00:00	07/11/18 09:21
400-156081-15	DUP-02	Water	07/10/18 00:00	07/11/18 09:21
400-156081-16	GWC-3	Water	07/10/18 16:40	07/11/18 09:21
400-156081-17	GWC-6	Water	07/11/18 08:45	07/12/18 09:35
400-156081-18	GWC-5	Water	07/11/18 09:17	07/12/18 09:35
400-156081-19	GWC-1	Water	07/11/18 09:25	07/12/18 09:35
400-156081-20	FB-02	Water	07/11/18 16:20	07/12/18 09:35

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: FB-01
Date Collected: 07/09/18 17:15
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/17/18 07:06	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 07:06	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 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		07/16/18 09:19	07/17/18 12:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 12:53	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 12:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:53	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 12:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:53	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 12:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 12:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 12:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 12:53	5
Lithium	<0.0011		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 12:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 12:53	5
Selenium	0.00042	J	0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 12:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 12:53	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		07/25/18 14:13	07/27/18 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/12/18 16:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0736	U	0.0698	0.0701	1.00	0.106	pCi/L	07/12/18 09:48	08/03/18 07:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					07/12/18 09:48	08/03/18 07:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.157	U	0.226	0.227	1.00	0.379	pCi/L	07/12/18 10:40	07/30/18 09:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					07/12/18 10:40	07/30/18 09:26	1
Y Carrier	85.6		40 - 110					07/12/18 10:40	07/30/18 09:26	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: FB-01

Date Collected: 07/09/18 17:15

Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1

Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.231	U	0.237	0.238	5.00	0.379	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: FERB-01

Lab Sample ID: 400-156081-2

Date Collected: 07/09/18 17:35

Matrix: Water

Date Received: 07/10/18 09:13

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			07/17/18 07:29	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 07:29	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 07:29	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		07/16/18 09:19	07/17/18 12:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 12:58	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 12:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:58	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 12:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:58	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 12:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 12:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 12:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 12:58	5
Lithium	<0.0011		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 12:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 12:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 12:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 12:58	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		07/25/18 14:13	07/27/18 15:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/12/18 16:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.290		0.111	0.114	1.00	0.0998	pCi/L	07/12/18 09:48	08/03/18 07:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/12/18 09:48	08/03/18 07:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0959	U	0.268	0.268	1.00	0.463	pCi/L	07/12/18 10:40	07/30/18 09:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/12/18 10:40	07/30/18 09:27	1
Y Carrier	74.4		40 - 110					07/12/18 10:40	07/30/18 09:27	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: FERB-01
Date Collected: 07/09/18 17:35
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-2
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.385	U	0.290	0.291	5.00	0.463	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-1A

Date Collected: 07/10/18 09:40

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4

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			07/17/18 08:15	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 08:15	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 08:15	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		07/16/18 09:19	07/17/18 13:25	5
Arsenic	0.00055	J	0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 13:25	5
Barium	0.024		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 13:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:25	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 13:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:25	5
Calcium	1.7		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 13:25	5
Chromium	0.0045		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 13:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 13:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 13:25	5
Lithium	0.0099		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 13:25	5
Molybdenum	0.00098	J	0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 13:25	5
Selenium	0.0021		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 13:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 13:25	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		07/18/18 12:53	07/18/18 17:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	90		5.0	3.4	mg/L			07/12/18 16:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
Radium-226	0.336		0.106	0.110	1.00	0.0805	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
Radium-228	0.287		0.187	0.189	1.00	0.282	pCi/L	07/16/18 11:00	08/01/18 10:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					07/16/18 11:00	08/01/18 10:07	1
Y Carrier	91.2		40 - 110					07/16/18 11:00	08/01/18 10:07	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-1A
Date Collected: 07/10/18 09:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.623		0.215	0.219	5.00	0.282	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-2A
Date Collected: 07/10/18 10:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.89	mg/L			07/18/18 15:27	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 15:27	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 15:27	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		07/16/18 09:19	07/17/18 13:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 13:52	5
Barium	0.042		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 13:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:52	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 13:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:52	5
Calcium	3.4		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 13:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 13:52	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 13:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 13:52	5
Lithium	0.0097		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 13:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 13:52	5
Selenium	0.0010	J	0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 13:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 13:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/18/18 12:53	07/18/18 17:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.337		0.106	0.110	1.00	0.0815	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.534		0.237	0.242	1.00	0.337	pCi/L	07/16/18 11:00	08/01/18 10:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/16/18 11:00	08/01/18 10:07	1
Y Carrier	87.1		40 - 110					07/16/18 11:00	08/01/18 10:07	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-2A
Date Collected: 07/10/18 10:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-5
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.872		0.260	0.266	5.00	0.337	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-3A
Date Collected: 07/10/18 10:28
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6
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			07/18/18 20:24	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 20:24	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 20:24	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 13:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 13:57	5
Barium	0.056		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 13:57	5
Beryllium	0.00038	J	0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:57	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 13:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:57	5
Calcium	1.9		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 13:57	5
Chromium	0.0022	J	0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 13:57	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 13:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 13:57	5
Lithium	0.0032	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 13:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 13:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 13:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 13:57	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		07/18/18 12:53	07/18/18 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.430		0.117	0.124	1.00	0.0887	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Ba Carrier	100		40 - 110				07/16/18 10:37	08/08/18 07:58	1	

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.370		0.216	0.219	1.00	0.323	pCi/L	07/16/18 11:00	08/01/18 10:07	1
Carrier	%Yield	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Ba Carrier	100		40 - 110				07/16/18 11:00	08/01/18 10:07	1	
Y Carrier	88.2		40 - 110				07/16/18 11:00	08/01/18 10:07	1	

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-3A
Date Collected: 07/10/18 10:28
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.800		0.246	0.252	5.00	0.323	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-3B

Date Collected: 07/10/18 11:57

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-7

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		1.0	0.89	mg/L			07/18/18 20:47	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 20:47	1
Sulfate	3.0		1.0	0.70	mg/L			07/18/18 20:47	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 14:01	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:01	5
Barium	0.078		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:01	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:01	5
Calcium	1.6		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:01	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:01	5
Lead	0.00053	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:01	5
Lithium	0.0014	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:01	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/18/18 12:53	07/18/18 17:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.446		0.119	0.125	1.00	0.0852	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	101		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.770		0.254	0.263	1.00	0.337	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	101		40 - 110					07/16/18 11:00	08/01/18 10:13	1
<i>Y Carrier</i>	90.1		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-3B
Date Collected: 07/10/18 11:57
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-7
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.22		0.280	0.291	5.00	0.337	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-7
Date Collected: 07/10/18 12:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-8
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			07/18/18 21:33	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 21:33	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 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		07/16/18 09:19	07/17/18 14:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:06	5
Barium	0.026		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:06	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:06	5
Calcium	1.4		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:06	5
Chromium	0.0095		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:06	5
Cobalt	0.00066	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:06	5
Lead	0.0013		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:06	5
Lithium	0.010		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:06	5
Selenium	0.026		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.364		0.127	0.131	1.00	0.118	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.275	U	0.277	0.279	1.00	0.451	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		40 - 110					07/16/18 11:00	08/01/18 10:13	1
Y Carrier	91.6		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-7
Date Collected: 07/10/18 12:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-8
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.640		0.305	0.308	5.00	0.451	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

Date Collected: 07/10/18 12:35

Matrix: Water

Date Received: 07/11/18 09:21

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			07/18/18 22:41	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 22:41	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 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		07/16/18 09:19	07/17/18 14:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:10	5
Barium	0.016		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:10	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:10	5
Calcium	1.1		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:10	5
Chromium	0.0065		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:10	5
Lithium	0.0095		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:10	5
Selenium	0.026		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.226		0.0926	0.0948	1.00	0.0862	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.234	U	0.248	0.249	1.00	0.405	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					07/16/18 11:00	08/01/18 10:13	1
Y Carrier	92.0		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

Date Collected: 07/10/18 12:35

Matrix: Water

Date Received: 07/11/18 09:21

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.460		0.265	0.266	5.00	0.405	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-4
Date Collected: 07/10/18 13:25
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-10
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.89	mg/L			07/18/18 23:04	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 23:04	1
Sulfate	3.4		1.0	0.70	mg/L			07/18/18 23:04	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 14:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:15	5
Barium	0.043		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:15	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:15	5
Calcium	0.99		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:15	5
Cobalt	0.00086	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:15	5
Lithium	0.0011	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:15	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.303		0.104	0.107	1.00	0.0923	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	96.8		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.207	U	0.215	0.216	1.00	0.350	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
<i>Ba Carrier</i>	96.8		40 - 110					07/16/18 11:00	08/01/18 10:13	1
<i>Y Carrier</i>	89.0		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-4
Date Collected: 07/10/18 13:25
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-10
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.510		0.239	0.241	5.00	0.350	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-5
Date Collected: 07/10/18 14:27
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-11
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		1.0	0.89	mg/L			07/18/18 23:27	1
Fluoride	0.17	J	0.20	0.082	mg/L			07/18/18 23:27	1
Sulfate	19		1.0	0.70	mg/L			07/18/18 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		07/16/18 09:19	07/17/18 14:19	5
Arsenic	0.00067	J	0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:19	5
Barium	0.14		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:19	5
Boron	0.042	J	0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:19	5
Calcium	3.7		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:19	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:19	5
Cobalt	0.0015	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:19	5
Lead	0.00045	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:19	5
Lithium	0.0012	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:19	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		07/20/18 13:14	07/21/18 12:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	76		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.631		0.140	0.151	1.00	0.0911	pCi/L	07/16/18 10:37	08/08/18 07:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					07/16/18 10:37	08/08/18 07:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.983		0.273	0.288	1.00	0.342	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					07/16/18 11:00	08/01/18 10:13	1
Y Carrier	90.1		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-5
Date Collected: 07/10/18 14:27
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-11
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.61		0.307	0.325	5.00	0.342	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-2
Date Collected: 07/10/18 15:55
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-12
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			07/18/18 23:50	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 23:50	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 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		07/16/18 09:19	07/17/18 14:24	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:24	5
Barium	0.073		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:24	5
Boron	0.044	J	0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:24	5
Calcium	3.9		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:24	5
Chromium	0.0033		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:24	5
Cobalt	0.00097	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:24	5
Lithium	0.0023	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:24	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.479		0.125	0.132	1.00	0.0949	pCi/L	07/16/18 10:37	08/08/18 07:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/16/18 10:37	08/08/18 07:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.458		0.213	0.217	1.00	0.304	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/16/18 11:00	08/01/18 10:13	1
Y Carrier	91.6		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-2
Date Collected: 07/10/18 15:55
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-12
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.937		0.247	0.254	5.00	0.304	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-4A

Date Collected: 07/10/18 15:55

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-13

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			07/19/18 00:13	1
Fluoride	<0.082		0.20	0.082	mg/L			07/19/18 00:13	1
Sulfate	0.76	J	1.0	0.70	mg/L			07/19/18 00:13	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 14:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:28	5
Barium	0.065		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:28	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:28	5
Calcium	2.0		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:28	5
Chromium	0.0029		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:28	5
Cobalt	0.00084	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:28	5
Lithium	0.0070		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:28	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		07/20/18 13:14	07/21/18 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.449		0.122	0.128	1.00	0.0938	pCi/L	07/16/18 10:37	08/08/18 07:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/16/18 10:37	08/08/18 07:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.297	U	0.229	0.231	1.00	0.363	pCi/L	07/16/18 11:00	08/01/18 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					07/16/18 11:00	08/01/18 10:13	1
Y Carrier	94.2		40 - 110					07/16/18 11:00	08/01/18 10:13	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-4A
Date Collected: 07/10/18 15:55
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-13
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.746		0.259	0.264	5.00	0.363	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: DUP-01
Date Collected: 07/10/18 00:00
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-14
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.89	mg/L			07/17/18 10:09	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 10:09	1
Sulfate	2.8		1.0	0.70	mg/L			07/17/18 10:09	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 14:33	5
Arsenic	0.0015		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:33	5
Barium	0.079		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:33	5
Boron	0.021	J	0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:33	5
Calcium	1.7		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:33	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:33	5
Lead	0.00047	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:33	5
Lithium	0.0014	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:33	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:33	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			07/12/18 16:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.358		0.129	0.133	1.00	0.115	pCi/L	07/16/18 10:37	08/08/18 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					07/16/18 10:37	08/08/18 07:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.712		0.320	0.327	1.00	0.459	pCi/L	07/16/18 11:00	08/01/18 10:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					07/16/18 11:00	08/01/18 10:07	1
Y Carrier	89.7		40 - 110					07/16/18 11:00	08/01/18 10:07	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: DUP-01
Date Collected: 07/10/18 00:00
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-14
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.07		0.345	0.353	5.00	0.459	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: DUP-02
Date Collected: 07/10/18 00:00
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-15
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			07/17/18 10:32	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 10:32	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 10:32	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		07/16/18 09:19	07/17/18 14:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 14:59	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:59	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:59	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:59	5
Lithium	<0.0011		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 14:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 14:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 14:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 14:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			07/12/18 16:50	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.342		0.106	0.110	1.00	0.0814	pCi/L	07/16/18 10:37	08/08/18 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/16/18 10:37	08/08/18 07:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.362	U	0.245	0.247	1.00	0.378	pCi/L	07/16/18 11:00	08/01/18 10:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/16/18 11:00	08/01/18 10:07	1
Y Carrier	77.8		40 - 110					07/16/18 11:00	08/01/18 10:07	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: DUP-02
Date Collected: 07/10/18 00:00
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-15
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.704		0.267	0.270	5.00	0.378	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-3
Date Collected: 07/10/18 16:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-16
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.9		1.0	0.89	mg/L			07/19/18 00:36	1
Fluoride	<0.082		0.20	0.082	mg/L			07/19/18 00:36	1
Sulfate	<0.70		1.0	0.70	mg/L			07/19/18 00:36	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		07/16/18 09:19	07/17/18 15:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 15:04	5
Barium	0.040		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:04	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:04	5
Calcium	2.1		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:04	5
Chromium	0.0035		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:04	5
Cobalt	0.00053	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:04	5
Lithium	0.0097		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 15:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 15:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 15:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 15:04	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		07/20/18 13:14	07/21/18 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56		5.0	3.4	mg/L			07/16/18 11:22	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.382		0.111	0.116	1.00	0.0742	pCi/L	07/16/18 10:37	08/08/18 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/16/18 10:37	08/08/18 07:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.269	U	0.192	0.194	1.00	0.297	pCi/L	07/16/18 11:00	08/01/18 10:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/16/18 11:00	08/01/18 10:07	1
Y Carrier	90.1		40 - 110					07/16/18 11:00	08/01/18 10:07	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-3
Date Collected: 07/10/18 16:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-16
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.651		0.222	0.226	5.00	0.297	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-6
Date Collected: 07/11/18 08:45
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-17
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.2		1.0	0.89	mg/L			07/17/18 10:55	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 10:55	1
Sulfate	0.78	J	1.0	0.70	mg/L			07/17/18 10:55	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 15:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 15:08	5
Barium	0.051		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:08	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:08	5
Calcium	1.6		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:08	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:08	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:08	5
Lead	0.00037	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:08	5
Lithium	0.0092		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 15:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 15:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 15:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 15:08	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		07/20/18 13:14	07/21/18 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			07/17/18 12:57	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.340		0.102	0.106	1.00	0.0760	pCi/L	07/19/18 08:31	08/10/18 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/19/18 08:31	08/10/18 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.201	U	0.226	0.227	1.00	0.372	pCi/L	07/19/18 09:43	08/01/18 16:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					07/19/18 09:43	08/01/18 16:44	1
Y Carrier	86.7		40 - 110					07/19/18 09:43	08/01/18 16:44	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-6
Date Collected: 07/11/18 08:45
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-17
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.542		0.248	0.251	5.00	0.372	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-5
Date Collected: 07/11/18 09:17
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-18
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		1.0	0.89	mg/L			07/19/18 08:58	1
Fluoride	0.37		0.20	0.082	mg/L			07/19/18 08:58	1
Sulfate	26		1.0	0.70	mg/L			07/19/18 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		07/16/18 09:19	07/17/18 15:13	5
Arsenic	0.00074	J	0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 15:13	5
Barium	0.64		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:13	5
Beryllium	0.00043	J	0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:13	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:13	5
Calcium	9.6		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:13	5
Cobalt	0.011		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:13	5
Lithium	0.0044	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 15:13	5
Molybdenum	0.0083	J	0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 15:13	5
Selenium	0.0077		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 15:13	5
Thallium	0.00050		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 15:13	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00015	J	0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	290		25	17	mg/L			07/17/18 12:57	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.31		0.252	0.327	1.00	0.0684	pCi/L	07/19/18 08:31	08/10/18 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					07/19/18 08:31	08/10/18 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.65		0.347	0.424	1.00	0.295	pCi/L	07/19/18 09:43	08/01/18 16:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					07/19/18 09:43	08/01/18 16:44	1
Y Carrier	86.7		40 - 110					07/19/18 09:43	08/01/18 16:44	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-5
Date Collected: 07/11/18 09:17
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-18
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.96		0.429	0.535	5.00	0.295	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-1
Date Collected: 07/11/18 09:25
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19
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			07/17/18 11:18	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 11:18	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 11:18	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 15:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 15:17	5
Barium	0.016		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:17	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:17	5
Calcium	0.18	J	0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:17	5
Lithium	0.0011	J	0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 15:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 15:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 15:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 15:17	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		07/20/18 13:14	07/21/18 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			07/17/18 12:57	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.318		0.0965	0.101	1.00	0.0715	pCi/L	07/19/18 08:31	08/10/18 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					07/19/18 08:31	08/10/18 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.249	U	0.181	0.183	1.00	0.283	pCi/L	07/19/18 09:43	08/01/18 16:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					07/19/18 09:43	08/01/18 16:45	1
Y Carrier	90.1		40 - 110					07/19/18 09:43	08/01/18 16:45	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-1
Date Collected: 07/11/18 09:25
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.567		0.205	0.209	5.00	0.283	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: FB-02
Date Collected: 07/11/18 16:20
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-20
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			07/17/18 14:20	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 14:20	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 14:20	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 15:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 15:22	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:22	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:22	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:22	5
Lithium	<0.0011		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 15:22	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 15:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 15:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 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		07/20/18 13:14	07/21/18 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/17/18 12:57	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.208		0.0856	0.0876	1.00	0.0802	pCi/L	07/19/18 08:31	08/10/18 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					07/19/18 08:31	08/10/18 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.274	U	0.226	0.227	1.00	0.360	pCi/L	07/19/18 09:43	08/01/18 16:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					07/19/18 09:43	08/01/18 16:45	1
Y Carrier	88.6		40 - 110					07/19/18 09:43	08/01/18 16:45	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

Client Sample ID: FB-02
Date Collected: 07/11/18 16:20
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-20
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.483		0.242	0.243	5.00	0.360	pCi/L		08/16/18 13:48	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

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
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

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: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: FB-01
Date Collected: 07/09/18 17:15
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 07:06	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 12:53	DRE	TAL PEN
Total/NA	Prep	7470A			405609	07/25/18 14:13	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405954	07/27/18 15:41	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375093	07/12/18 09:48	JLC	TAL SL
Total/NA	Analysis	9315		1	380132	08/03/18 07:13	ALS	TAL SL
Total/NA	Prep	PrecSep_0			375099	07/12/18 10:40	JLC	TAL SL
Total/NA	Analysis	9320		1	378627	07/30/18 09:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: FERB-01
Date Collected: 07/09/18 17:35
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 07:29	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 12:58	DRE	TAL PEN
Total/NA	Prep	7470A			405609	07/25/18 14:13	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405954	07/27/18 15:43	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375093	07/12/18 09:48	JLC	TAL SL
Total/NA	Analysis	9315		1	380132	08/03/18 07:13	ALS	TAL SL
Total/NA	Prep	PrecSep_0			375099	07/12/18 10:40	JLC	TAL SL
Total/NA	Analysis	9320		1	378627	07/30/18 09:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-1A
Date Collected: 07/10/18 09:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 08:15	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:25	DRE	TAL PEN
Total/NA	Prep	7470A			404611	07/18/18 12:53	DN1	TAL PEN
Total/NA	Analysis	7470A		1	404947	07/18/18 17:38	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-1A

Lab Sample ID: 400-156081-4

Date Collected: 07/10/18 09:40

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379713	08/01/18 10:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-2A

Lab Sample ID: 400-156081-5

Date Collected: 07/10/18 10:15

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 15:27	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:52	DRE	TAL PEN
Total/NA	Prep	7470A			404611	07/18/18 12:53	DN1	TAL PEN
Total/NA	Analysis	7470A		1	404947	07/18/18 17:40	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379713	08/01/18 10:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-3A

Lab Sample ID: 400-156081-6

Date Collected: 07/10/18 10:28

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 20:24	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:57	DRE	TAL PEN
Total/NA	Prep	7470A			404611	07/18/18 12:53	DN1	TAL PEN
Total/NA	Analysis	7470A		1	404947	07/18/18 17:42	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379713	08/01/18 10:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-3B

Lab Sample ID: 400-156081-7

Date Collected: 07/10/18 11:57

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 20:47	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:01	DRE	TAL PEN
Total/NA	Prep	7470A			404611	07/18/18 12:53	DN1	TAL PEN
Total/NA	Analysis	7470A		1	404947	07/18/18 17:56	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-7

Lab Sample ID: 400-156081-8

Date Collected: 07/10/18 12:15

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 21:33	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:06	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:16	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

Date Collected: 07/10/18 12:35

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 22:41	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:10	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:23	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

Date Collected: 07/10/18 12:35

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-4

Lab Sample ID: 400-156081-10

Date Collected: 07/10/18 13:25

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 23:04	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:15	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:25	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWA-5

Lab Sample ID: 400-156081-11

Date Collected: 07/10/18 14:27

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 23:27	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:19	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:27	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-2

Lab Sample ID: 400-156081-12

Date Collected: 07/10/18 15:55

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 23:50	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:24	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:29	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWC-4A

Lab Sample ID: 400-156081-13

Date Collected: 07/10/18 15:55

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/19/18 00:13	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:28	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:44	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379720	08/01/18 10:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-156081-14

Date Collected: 07/10/18 00:00

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 10:09	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:33	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:46	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:57	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: DUP-01

Lab Sample ID: 400-156081-14

Date Collected: 07/10/18 00:00

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379713	08/01/18 10:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-156081-15

Date Collected: 07/10/18 00:00

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 10:32	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:59	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:48	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379713	08/01/18 10:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWC-3

Lab Sample ID: 400-156081-16

Date Collected: 07/10/18 16:40

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/19/18 00:36	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:04	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:50	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			375777	07/16/18 10:37	JLC	TAL SL
Total/NA	Analysis	9315		1	380987	08/08/18 07:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			375784	07/16/18 11:00	JLC	TAL SL
Total/NA	Analysis	9320		1	379713	08/01/18 10:07	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-6

Lab Sample ID: 400-156081-17

Date Collected: 07/11/18 08:45

Matrix: Water

Date Received: 07/12/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 10:55	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:08	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:52	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			376513	07/19/18 08:31	JLC	TAL SL
Total/NA	Analysis	9315		1	381569	08/10/18 05:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			376526	07/19/18 09:43	JLC	TAL SL
Total/NA	Analysis	9320		1	379562	08/01/18 16:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWC-5

Lab Sample ID: 400-156081-18

Date Collected: 07/11/18 09:17

Matrix: Water

Date Received: 07/12/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404990	07/19/18 08:58	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:13	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:54	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			376513	07/19/18 08:31	JLC	TAL SL
Total/NA	Analysis	9315		1	381569	08/10/18 05:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			376526	07/19/18 09:43	JLC	TAL SL
Total/NA	Analysis	9320		1	379562	08/01/18 16:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-156081-19

Date Collected: 07/11/18 09:25

Matrix: Water

Date Received: 07/12/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 11:18	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:17	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:56	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			376513	07/19/18 08:31	JLC	TAL SL
Total/NA	Analysis	9315		1	381569	08/10/18 05:39	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Client Sample ID: GWC-1

Date Collected: 07/11/18 09:25

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			376526	07/19/18 09:43	JLC	TAL SL
Total/NA	Analysis	9320		1	379562	08/01/18 16:45	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Client Sample ID: FB-02

Date Collected: 07/11/18 16:20

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 14:20	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:22	DRE	TAL PEN
Total/NA	Prep	7470A			405137	07/20/18 13:14	DN1	TAL PEN
Total/NA	Analysis	7470A		1	405239	07/21/18 12:57	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN
Total/NA	Prep	PrecSep-21			376513	07/19/18 08:31	JLC	TAL SL
Total/NA	Analysis	9315		1	381569	08/10/18 05:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			376526	07/19/18 09:43	JLC	TAL SL
Total/NA	Analysis	9320		1	379562	08/01/18 16:45	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	382942	08/16/18 13:48	RTM	TAL SL

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

HPLC/IC

Analysis Batch: 404690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	300.0	
400-156081-2	FERB-01	Total/NA	Water	300.0	
400-156081-4	GWA-1A	Total/NA	Water	300.0	
400-156081-14	DUP-01	Total/NA	Water	300.0	
400-156081-15	DUP-02	Total/NA	Water	300.0	
400-156081-17	GWC-6	Total/NA	Water	300.0	
400-156081-19	GWC-1	Total/NA	Water	300.0	
400-156081-20	FB-02	Total/NA	Water	300.0	
MB 400-404690/36	Method Blank	Total/NA	Water	300.0	
LCS 400-404690/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-404690/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-156002-A-8 MS	Matrix Spike	Total/NA	Water	300.0	
400-156002-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 404938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-5	GWA-2A	Total/NA	Water	300.0	
400-156081-6	GWA-3A	Total/NA	Water	300.0	
400-156081-7	GWA-3B	Total/NA	Water	300.0	
400-156081-8	GWA-7	Total/NA	Water	300.0	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	300.0	
400-156081-10	GWA-4	Total/NA	Water	300.0	
400-156081-11	GWA-5	Total/NA	Water	300.0	
400-156081-12	GWC-2	Total/NA	Water	300.0	
400-156081-13	GWC-4A	Total/NA	Water	300.0	
400-156081-16	GWC-3	Total/NA	Water	300.0	
400-156081-5 MS	GWA-2A	Total/NA	Water	300.0	
400-156081-5 MSD	GWA-2A	Total/NA	Water	300.0	

Analysis Batch: 404990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-18	GWC-5	Total/NA	Water	300.0	

Metals

Prep Batch: 404552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total Recoverable	Water	3005A	
400-156081-2	FERB-01	Total Recoverable	Water	3005A	
400-156081-4	GWA-1A	Total Recoverable	Water	3005A	
400-156081-5	GWA-2A	Total Recoverable	Water	3005A	
400-156081-6	GWA-3A	Total Recoverable	Water	3005A	
400-156081-7	GWA-3B	Total Recoverable	Water	3005A	
400-156081-8	GWA-7	Total Recoverable	Water	3005A	
400-156081-9	GWA-7-FILTERED	Total Recoverable	Water	3005A	
400-156081-10	GWA-4	Total Recoverable	Water	3005A	
400-156081-11	GWA-5	Total Recoverable	Water	3005A	
400-156081-12	GWC-2	Total Recoverable	Water	3005A	
400-156081-13	GWC-4A	Total Recoverable	Water	3005A	
400-156081-14	DUP-01	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Metals (Continued)

Prep Batch: 404552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-15	DUP-02	Total Recoverable	Water	3005A	
400-156081-16	GWC-3	Total Recoverable	Water	3005A	
400-156081-17	GWC-6	Total Recoverable	Water	3005A	
400-156081-18	GWC-5	Total Recoverable	Water	3005A	
400-156081-19	GWC-1	Total Recoverable	Water	3005A	
400-156081-20	FB-02	Total Recoverable	Water	3005A	
MB 400-404552/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-404552/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-156081-B-3-B MS ^5	400-156081-B-3-B MS ^5	Total Recoverable	Water	3005A	
400-156081-B-3-C MSD ^5	400-156081-B-3-C MSD ^5	Total Recoverable	Water	3005A	

Prep Batch: 404611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-4	GWA-1A	Total/NA	Water	7470A	
400-156081-5	GWA-2A	Total/NA	Water	7470A	
400-156081-6	GWA-3A	Total/NA	Water	7470A	
400-156081-7	GWA-3B	Total/NA	Water	7470A	
MB 400-404611/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-404611/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-156002-C-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-156002-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 404861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total Recoverable	Water	6020	404552
400-156081-2	FERB-01	Total Recoverable	Water	6020	404552
400-156081-4	GWA-1A	Total Recoverable	Water	6020	404552
400-156081-5	GWA-2A	Total Recoverable	Water	6020	404552
400-156081-6	GWA-3A	Total Recoverable	Water	6020	404552
400-156081-7	GWA-3B	Total Recoverable	Water	6020	404552
400-156081-8	GWA-7	Total Recoverable	Water	6020	404552
400-156081-9	GWA-7-FILTERED	Total Recoverable	Water	6020	404552
400-156081-10	GWA-4	Total Recoverable	Water	6020	404552
400-156081-11	GWA-5	Total Recoverable	Water	6020	404552
400-156081-12	GWC-2	Total Recoverable	Water	6020	404552
400-156081-13	GWC-4A	Total Recoverable	Water	6020	404552
400-156081-14	DUP-01	Total Recoverable	Water	6020	404552
400-156081-15	DUP-02	Total Recoverable	Water	6020	404552
400-156081-16	GWC-3	Total Recoverable	Water	6020	404552
400-156081-17	GWC-6	Total Recoverable	Water	6020	404552
400-156081-18	GWC-5	Total Recoverable	Water	6020	404552
400-156081-19	GWC-1	Total Recoverable	Water	6020	404552
400-156081-20	FB-02	Total Recoverable	Water	6020	404552
MB 400-404552/1-A ^5	Method Blank	Total Recoverable	Water	6020	404552
LCS 400-404552/2-A	Lab Control Sample	Total Recoverable	Water	6020	404552
400-156081-B-3-B MS ^5	400-156081-B-3-B MS ^5	Total Recoverable	Water	6020	404552
400-156081-B-3-C MSD ^5	400-156081-B-3-C MSD ^5	Total Recoverable	Water	6020	404552

Analysis Batch: 404947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-4	GWA-1A	Total/NA	Water	7470A	404611

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Metals (Continued)

Analysis Batch: 404947 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-5	GWA-2A	Total/NA	Water	7470A	404611
400-156081-6	GWA-3A	Total/NA	Water	7470A	404611
400-156081-7	GWA-3B	Total/NA	Water	7470A	404611
MB 400-404611/13-A	Method Blank	Total/NA	Water	7470A	404611
LCS 400-404611/14-A	Lab Control Sample	Total/NA	Water	7470A	404611
400-156002-C-1-B MS	Matrix Spike	Total/NA	Water	7470A	404611
400-156002-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	404611

Prep Batch: 405137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-8	GWA-7	Total/NA	Water	7470A	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	7470A	
400-156081-10	GWA-4	Total/NA	Water	7470A	
400-156081-11	GWA-5	Total/NA	Water	7470A	
400-156081-12	GWC-2	Total/NA	Water	7470A	
400-156081-13	GWC-4A	Total/NA	Water	7470A	
400-156081-14	DUP-01	Total/NA	Water	7470A	
400-156081-15	DUP-02	Total/NA	Water	7470A	
400-156081-16	GWC-3	Total/NA	Water	7470A	
400-156081-17	GWC-6	Total/NA	Water	7470A	
400-156081-18	GWC-5	Total/NA	Water	7470A	
400-156081-19	GWC-1	Total/NA	Water	7470A	
400-156081-20	FB-02	Total/NA	Water	7470A	
MB 400-405137/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-405137/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-156081-8 MS	GWA-7	Total/NA	Water	7470A	
400-156081-8 MSD	GWA-7	Total/NA	Water	7470A	

Analysis Batch: 405239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-8	GWA-7	Total/NA	Water	7470A	405137
400-156081-9	GWA-7-FILTERED	Total/NA	Water	7470A	405137
400-156081-10	GWA-4	Total/NA	Water	7470A	405137
400-156081-11	GWA-5	Total/NA	Water	7470A	405137
400-156081-12	GWC-2	Total/NA	Water	7470A	405137
400-156081-13	GWC-4A	Total/NA	Water	7470A	405137
400-156081-14	DUP-01	Total/NA	Water	7470A	405137
400-156081-15	DUP-02	Total/NA	Water	7470A	405137
400-156081-16	GWC-3	Total/NA	Water	7470A	405137
400-156081-17	GWC-6	Total/NA	Water	7470A	405137
400-156081-18	GWC-5	Total/NA	Water	7470A	405137
400-156081-19	GWC-1	Total/NA	Water	7470A	405137
400-156081-20	FB-02	Total/NA	Water	7470A	405137
MB 400-405137/13-A	Method Blank	Total/NA	Water	7470A	405137
LCS 400-405137/14-A	Lab Control Sample	Total/NA	Water	7470A	405137
400-156081-8 MS	GWA-7	Total/NA	Water	7470A	405137
400-156081-8 MSD	GWA-7	Total/NA	Water	7470A	405137

Prep Batch: 405609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Metals (Continued)

Prep Batch: 405609 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-2	FERB-01	Total/NA	Water	7470A	
MB 400-405609/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-405609/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-156441-C-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-156441-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 405954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	7470A	405609
400-156081-2	FERB-01	Total/NA	Water	7470A	405609
MB 400-405609/13-A	Method Blank	Total/NA	Water	7470A	405609
LCS 400-405609/14-A	Lab Control Sample	Total/NA	Water	7470A	405609
400-156441-C-1-B MS	Matrix Spike	Total/NA	Water	7470A	405609
400-156441-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	405609

General Chemistry

Analysis Batch: 404278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	SM 2540C	
400-156081-2	FERB-01	Total/NA	Water	SM 2540C	
400-156081-4	GWA-1A	Total/NA	Water	SM 2540C	
400-156081-14	DUP-01	Total/NA	Water	SM 2540C	
400-156081-15	DUP-02	Total/NA	Water	SM 2540C	
MB 400-404278/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-404278/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156081-4 DU	GWA-1A	Total/NA	Water	SM 2540C	
400-156081-A-3 DU	400-156081-A-3 DU	Total/NA	Water	SM 2540C	

Analysis Batch: 404518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-5	GWA-2A	Total/NA	Water	SM 2540C	
400-156081-6	GWA-3A	Total/NA	Water	SM 2540C	
400-156081-7	GWA-3B	Total/NA	Water	SM 2540C	
400-156081-8	GWA-7	Total/NA	Water	SM 2540C	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	SM 2540C	
400-156081-10	GWA-4	Total/NA	Water	SM 2540C	
400-156081-11	GWA-5	Total/NA	Water	SM 2540C	
400-156081-12	GWC-2	Total/NA	Water	SM 2540C	
400-156081-13	GWC-4A	Total/NA	Water	SM 2540C	
400-156081-16	GWC-3	Total/NA	Water	SM 2540C	
MB 400-404518/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-404518/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 404673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-17	GWC-6	Total/NA	Water	SM 2540C	
400-156081-18	GWC-5	Total/NA	Water	SM 2540C	
400-156081-19	GWC-1	Total/NA	Water	SM 2540C	
400-156081-20	FB-02	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

General Chemistry (Continued)

Analysis Batch: 404673 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-404673/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-404673/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156081-19 DU	GWC-1	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 375093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	PrecSep-21	
400-156081-2	FERB-01	Total/NA	Water	PrecSep-21	
MB 160-375093/13-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-375093/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-375093/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 375099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	PrecSep_0	
400-156081-2	FERB-01	Total/NA	Water	PrecSep_0	
MB 160-375099/13-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-375099/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-375099/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 375777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-4	GWA-1A	Total/NA	Water	PrecSep-21	
400-156081-5	GWA-2A	Total/NA	Water	PrecSep-21	
400-156081-6	GWA-3A	Total/NA	Water	PrecSep-21	
400-156081-7	GWA-3B	Total/NA	Water	PrecSep-21	
400-156081-8	GWA-7	Total/NA	Water	PrecSep-21	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	PrecSep-21	
400-156081-10	GWA-4	Total/NA	Water	PrecSep-21	
400-156081-11	GWA-5	Total/NA	Water	PrecSep-21	
400-156081-12	GWC-2	Total/NA	Water	PrecSep-21	
400-156081-13	GWC-4A	Total/NA	Water	PrecSep-21	
400-156081-14	DUP-01	Total/NA	Water	PrecSep-21	
400-156081-15	DUP-02	Total/NA	Water	PrecSep-21	
400-156081-16	GWC-3	Total/NA	Water	PrecSep-21	
MB 160-375777/19-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-375777/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-375777/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 375784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-4	GWA-1A	Total/NA	Water	PrecSep_0	
400-156081-5	GWA-2A	Total/NA	Water	PrecSep_0	
400-156081-6	GWA-3A	Total/NA	Water	PrecSep_0	
400-156081-7	GWA-3B	Total/NA	Water	PrecSep_0	
400-156081-8	GWA-7	Total/NA	Water	PrecSep_0	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	PrecSep_0	
400-156081-10	GWA-4	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Rad (Continued)

Prep Batch: 375784 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-11	GWA-5	Total/NA	Water	PrecSep_0	
400-156081-12	GWC-2	Total/NA	Water	PrecSep_0	
400-156081-13	GWC-4A	Total/NA	Water	PrecSep_0	
400-156081-14	DUP-01	Total/NA	Water	PrecSep_0	
400-156081-15	DUP-02	Total/NA	Water	PrecSep_0	
400-156081-16	GWC-3	Total/NA	Water	PrecSep_0	
MB 160-375784/19-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-375784/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-375784/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 376513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-17	GWC-6	Total/NA	Water	PrecSep-21	
400-156081-18	GWC-5	Total/NA	Water	PrecSep-21	
400-156081-19	GWC-1	Total/NA	Water	PrecSep-21	
400-156081-20	FB-02	Total/NA	Water	PrecSep-21	
MB 160-376513/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-376513/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-376513/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 376526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-17	GWC-6	Total/NA	Water	PrecSep_0	
400-156081-18	GWC-5	Total/NA	Water	PrecSep_0	
400-156081-19	GWC-1	Total/NA	Water	PrecSep_0	
400-156081-20	FB-02	Total/NA	Water	PrecSep_0	
MB 160-376526/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-376526/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-376526/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-404690/36
Matrix: Water
Analysis Batch: 404690

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			07/17/18 04:49	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 04:49	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 04:49	1

Lab Sample ID: LCS 400-404690/37
Matrix: Water
Analysis Batch: 404690

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	9.35		mg/L		94	90 - 110
Fluoride	10.0	9.96		mg/L		100	90 - 110
Sulfate	10.0	9.72		mg/L		97	90 - 110

Lab Sample ID: LCSD 400-404690/38
Matrix: Water
Analysis Batch: 404690

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	9.34		mg/L		93	90 - 110	0	15
Fluoride	10.0	9.90		mg/L		99	90 - 110	1	15
Sulfate	10.0	9.81		mg/L		98	90 - 110	1	15

Lab Sample ID: 400-156002-A-8 MS
Matrix: Water
Analysis Batch: 404690

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	77	E	10.0	84.6	E 4	mg/L		76	80 - 120
Fluoride	<0.082		10.0	10.4		mg/L		104	80 - 120
Sulfate	6.6		10.0	16.8		mg/L		102	80 - 120

Lab Sample ID: 400-156002-A-8 MSD
Matrix: Water
Analysis Batch: 404690

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	77	E	10.0	84.9	E 4	mg/L		79	80 - 120	0	20
Fluoride	<0.082		10.0	10.3		mg/L		103	80 - 120	1	20
Sulfate	6.6		10.0	16.9		mg/L		103	80 - 120	1	20

Lab Sample ID: 400-156081-5 MS
Matrix: Water
Analysis Batch: 404938

Client Sample ID: GWA-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		10.0	21.7		mg/L		93	80 - 120
Fluoride	<0.082		10.0	9.95		mg/L		100	80 - 120
Sulfate	<0.70		10.0	10.3		mg/L		103	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-156081-5 MSD
Matrix: Water
Analysis Batch: 404938

Client Sample ID: GWA-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		10.0	21.8		mg/L		94	80 - 120	0	20
Fluoride	<0.082		10.0	9.96		mg/L		100	80 - 120	0	20
Sulfate	<0.70		10.0	10.2		mg/L		102	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-404552/1-A ^5
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/16/18 09:19	07/17/18 12:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/16/18 09:19	07/17/18 12:40	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 12:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:40	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 12:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:40	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 12:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 12:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 12:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 12:40	5
Lithium	<0.0011		0.0050	0.0011	mg/L		07/16/18 09:19	07/17/18 12:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/16/18 09:19	07/17/18 12:40	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/16/18 09:19	07/17/18 12:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/16/18 09:19	07/17/18 12:40	5

Lab Sample ID: LCS 400-404552/2-A
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0514		mg/L		103	80 - 120
Arsenic	0.0500	0.0515		mg/L		103	80 - 120
Barium	0.0500	0.0529		mg/L		106	80 - 120
Beryllium	0.0500	0.0511		mg/L		102	80 - 120
Boron	0.100	0.102		mg/L		102	80 - 120
Cadmium	0.0500	0.0530		mg/L		106	80 - 120
Calcium	5.00	5.11		mg/L		102	80 - 120
Chromium	0.0500	0.0507		mg/L		101	80 - 120
Cobalt	0.0500	0.0541		mg/L		108	80 - 120
Lead	0.0500	0.0522		mg/L		104	80 - 120
Lithium	0.0500	0.0536		mg/L		107	80 - 120
Molybdenum	0.0500	0.0511		mg/L		102	80 - 120
Selenium	0.0500	0.0503		mg/L		101	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-156081-B-3-B MS ^5

Matrix: Water
Analysis Batch: 404861

Client Sample ID: 400-156081-B-3-B MS ^5

Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Result			Result						
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	
Arsenic	0.00084	J	0.0500	0.0547		mg/L		108	75 - 125	
Barium	0.027		0.0500	0.0830		mg/L		112	75 - 125	
Beryllium	<0.00034		0.0500	0.0527		mg/L		105	75 - 125	
Boron	<0.021		0.100	0.118		mg/L		118	75 - 125	
Cadmium	<0.00034		0.0500	0.0528		mg/L		106	75 - 125	
Calcium	1.3		5.00	6.60		mg/L		105	75 - 125	
Chromium	0.0063		0.0500	0.0587		mg/L		105	75 - 125	
Cobalt	0.00048	J	0.0500	0.0562		mg/L		111	75 - 125	
Lead	0.00055	J	0.0500	0.0540		mg/L		107	75 - 125	
Lithium	0.0066		0.0500	0.0592		mg/L		105	75 - 125	
Molybdenum	<0.00085		0.0500	0.0536		mg/L		107	75 - 125	
Selenium	0.00025	J	0.0500	0.0533		mg/L		106	75 - 125	
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	

Lab Sample ID: 400-156081-B-3-C MSD ^5

Matrix: Water
Analysis Batch: 404861

Client Sample ID: 400-156081-B-3-C MSD ^5

Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Result			Result							
Antimony	<0.0010		0.0500	0.0521		mg/L		104	75 - 125	2	20
Arsenic	0.00084	J	0.0500	0.0543		mg/L		107	75 - 125	1	20
Barium	0.027		0.0500	0.0828		mg/L		112	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0518		mg/L		104	75 - 125	2	20
Boron	<0.021		0.100	0.115		mg/L		115	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0542		mg/L		108	75 - 125	3	20
Calcium	1.3		5.00	6.52		mg/L		104	75 - 125	1	20
Chromium	0.0063		0.0500	0.0591		mg/L		106	75 - 125	1	20
Cobalt	0.00048	J	0.0500	0.0565		mg/L		112	75 - 125	1	20
Lead	0.00055	J	0.0500	0.0532		mg/L		105	75 - 125	1	20
Lithium	0.0066		0.0500	0.0590		mg/L		105	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0525		mg/L		105	75 - 125	2	20
Selenium	0.00025	J	0.0500	0.0534		mg/L		106	75 - 125	0	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-404611/13-A

Matrix: Water
Analysis Batch: 404947

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 404611

Analyte	MB	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result									
Mercury	<0.000070		0.00020	0.000070	mg/L		07/18/18 12:53	07/18/18 16:34		1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 400-404611/14-A
Matrix: Water
Analysis Batch: 404947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000975		mg/L		97	80 - 120

Lab Sample ID: 400-156002-C-1-B MS
Matrix: Water
Analysis Batch: 404947

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 404611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00081	F1	0.00201	0.00197	F1	mg/L		58	80 - 120

Lab Sample ID: 400-156002-C-1-C MSD
Matrix: Water
Analysis Batch: 404947

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 404611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00081	F1	0.00201	0.00190	F1	mg/L		54	80 - 120	4	20

Lab Sample ID: MB 400-405137/13-A
Matrix: Water
Analysis Batch: 405239

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405137

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/18 13:14	07/21/18 12:12	1

Lab Sample ID: LCS 400-405137/14-A
Matrix: Water
Analysis Batch: 405239

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405137

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00107		mg/L		106	80 - 120

Lab Sample ID: 400-156081-8 MS
Matrix: Water
Analysis Batch: 405239

Client Sample ID: GWA-7
Prep Type: Total/NA
Prep Batch: 405137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00218		mg/L		108	80 - 120

Lab Sample ID: 400-156081-8 MSD
Matrix: Water
Analysis Batch: 405239

Client Sample ID: GWA-7
Prep Type: Total/NA
Prep Batch: 405137

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00216		mg/L		107	80 - 120	1	20

Lab Sample ID: MB 400-405609/13-A
Matrix: Water
Analysis Batch: 405954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405609

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000765	J	0.00020	0.000070	mg/L		07/25/18 14:13	07/27/18 14:58	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Lab Sample ID: LCS 400-405609/14-A
Matrix: Water
Analysis Batch: 405954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405609

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00102		mg/L		102	80 - 120

Lab Sample ID: 400-156441-C-1-B MS
Matrix: Water
Analysis Batch: 405954

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 405609

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.000071	J B	0.00201	0.00195		mg/L		93	80 - 120

Lab Sample ID: 400-156441-C-1-C MSD
Matrix: Water
Analysis Batch: 405954

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 405609

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.000071	J B	0.00201	0.00194		mg/L		93	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-404278/1
Matrix: Water
Analysis Batch: 404278

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			07/12/18 16:50	1

Lab Sample ID: LCS 400-404278/2
Matrix: Water
Analysis Batch: 404278

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: 400-156081-4 DU
Matrix: Water
Analysis Batch: 404278

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	90		90.0		mg/L		0	5

Lab Sample ID: 400-156081-A-3 DU
Matrix: Water
Analysis Batch: 404278

Client Sample ID: 400-156081-A-3 DU
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		2	5

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 400-404518/1
Matrix: Water
Analysis Batch: 404518

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/16/18 11:22	1

Lab Sample ID: LCS 400-404518/2
Matrix: Water
Analysis Batch: 404518

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	268		mg/L		91	78 - 122

Lab Sample ID: MB 400-404673/1
Matrix: Water
Analysis Batch: 404673

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			07/17/18 12:57	1

Lab Sample ID: LCS 400-404673/2
Matrix: Water
Analysis Batch: 404673

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: 400-156081-19 DU
Matrix: Water
Analysis Batch: 404673

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	32		36.0	F3	mg/L		12	5

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-375093/13-A
Matrix: Water
Analysis Batch: 380132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 375093

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2190		0.103	0.105	1.00	0.116	pCi/L	07/12/18 10:32	08/03/18 07:13	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	07/12/18 10:32	08/03/18 07:13	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-375093/1-A
Matrix: Water
Analysis Batch: 380133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 375093

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-226	11.4	9.846		1.06	1.00	0.107	pCi/L	87	68 - 137	
Carrier	%Yield	LCS Qualifier	Limits							
Ba Carrier	104		40 - 110							

Lab Sample ID: LCSD 160-375093/2-A
Matrix: Water
Analysis Batch: 380133

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 375093

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	8.755		0.963	1.00	0.102	pCi/L	77	68 - 137	0.54	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	104		40 - 110								

Lab Sample ID: MB 160-375777/19-A
Matrix: Water
Analysis Batch: 380987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 375777

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2195		0.0879	0.0901	1.00	0.0882	pCi/L	07/16/18 10:37	08/08/18 07:59	1
Carrier	%Yield	MB Qualifier	Limits							
Ba Carrier	102		40 - 110							
								Prepared	Analyzed	Dil Fac
								07/16/18 10:37	08/08/18 07:59	1

Lab Sample ID: LCS 160-375777/1-A
Matrix: Water
Analysis Batch: 380987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 375777

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.08		1.05	1.00	0.108	pCi/L	89	68 - 137
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-375777/2-A
Matrix: Water
Analysis Batch: 380987

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 375777

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	10.40		1.08	1.00	0.0820	pCi/L	92	68 - 137	0.15	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-375777/2-A
Matrix: Water
Analysis Batch: 380987

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 375777

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	94.7		40 - 110

Lab Sample ID: MB 160-376513/23-A
Matrix: Water
Analysis Batch: 381568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 376513

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-226	0.1021		0.0625	0.0632	1.00	0.0750	pCi/L	07/19/18 08:31	08/10/18 05:43	1

	MB	MB	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	99.4		40 - 110

	Prepared	Analyzed	Dil Fac							
	07/19/18 08:31	08/10/18 05:43	1							

Lab Sample ID: LCS 160-376513/1-A
Matrix: Water
Analysis Batch: 381569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 376513

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-226	11.4	9.182		0.961	1.00	0.0741	pCi/L	81	68 - 137	

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	98.8		40 - 110

Lab Sample ID: LCSD 160-376513/2-A
Matrix: Water
Analysis Batch: 381569

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 376513

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	Limit
Radium-226	11.4	9.902		1.03	1.00	0.0776	pCi/L	87	68 - 137	0.36	1	

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	101		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-375099/13-A
Matrix: Water
Analysis Batch: 378627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 375099

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	0.1992	U	0.232	0.232	1.00	0.381	pCi/L	07/12/18 10:40	07/30/18 09:27	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-375099/13-A
Matrix: Water
Analysis Batch: 378627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 375099

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	84.9		40 - 110

Prepared	Analyzed	Dil Fac
07/12/18 10:40	07/30/18 09:27	1
07/12/18 10:40	07/30/18 09:27	1

Lab Sample ID: LCS 160-375099/1-A
Matrix: Water
Analysis Batch: 378627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 375099

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.10	9.774		1.16	1.00	0.501	pCi/L	121	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	77.0		40 - 110

Lab Sample ID: LCSD 160-375099/2-A
Matrix: Water
Analysis Batch: 378627

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 375099

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	8.10	9.096		1.08	1.00	0.427	pCi/L	112	56 - 140	0.30	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	79.3		40 - 110

Lab Sample ID: MB 160-375784/19-A
Matrix: Water
Analysis Batch: 379720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 375784

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.002167	U	0.218	0.218	1.00	0.390	pCi/L	07/16/18 11:00	08/01/18 10:13	1

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	78.1		40 - 110

Prepared	Analyzed	Dil Fac
07/16/18 11:00	08/01/18 10:13	1
07/16/18 11:00	08/01/18 10:13	1

Lab Sample ID: LCS 160-375784/1-A
Matrix: Water
Analysis Batch: 379713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 375784

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.2	11.05		1.22	1.00	0.313	pCi/L	99	56 - 140

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-375784/1-A
Matrix: Water
Analysis Batch: 379713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 375784

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: LCSD 160-375784/2-A
Matrix: Water
Analysis Batch: 379713

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 375784

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	11.2	11.77		1.31	1.00	0.324	pCi/L	105	56 - 140	0.29	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	94.7		40 - 110
Y Carrier	85.2		40 - 110

Lab Sample ID: MB 160-376526/23-A
Matrix: Water
Analysis Batch: 379720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 376526

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.09901	U	0.190	0.191	1.00	0.324	pCi/L	07/19/18 09:43	08/01/18 16:48	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110	07/19/18 09:43	08/01/18 16:48	1
Y Carrier	88.2		40 - 110	07/19/18 09:43	08/01/18 16:48	1

Lab Sample ID: LCS 160-376526/1-A
Matrix: Water
Analysis Batch: 379562

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 376526

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.2	10.22		1.13	1.00	0.322	pCi/L	92	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	87.1		40 - 110

Lab Sample ID: LCSD 160-376526/2-A
Matrix: Water
Analysis Batch: 379562

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 376526

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	11.2	9.202		1.04	1.00	0.308	pCi/L	82	56 - 140	0.47	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
SDG: Ash Landfill #3 - Background

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-376526/2-A
Matrix: Water
Analysis Batch: 379562

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 376526

<i>Carrier</i>	<i>LCSD %Yield</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	101		40 - 110
<i>Y Carrier</i>	87.5		40 - 110

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156081-2
SDG Number: Ash Landfill #3 - Background

Login Number: 156081

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-7, 2.3°C, 2.3°C IR-7, 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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156081-2
SDG Number: Ash Landfill #3 - Background

Login Number: 156081

List Number: 2

Creator: Dameron, Bryan K

List Source: TestAmerica St. Louis

List Creation: 07/11/18 09:38 AM

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.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
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?	N/A	
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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156081-2
SDG Number: Ash Landfill #3 - Background

Login Number: 156081

List Number: 4

Creator: McBride, Mike

List Source: TestAmerica St. Louis

List Creation: 07/18/18 10:59 AM

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.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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?	N/A	Received project as a subcontract.
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: 400-156081-2
SDG: Ash Landfill #3 - Background

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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18 *
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-2
 SDG: Ash Landfill #3 - Background

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
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18 *
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18 *
West Virginia DEP	State Program	3	381	08-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

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: 400-156081-1

TestAmerica SDG: Ash Landfill #3 - Compliance

Client Project/Site: CCR - Plant McIntosh

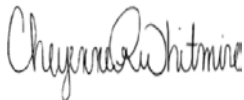
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/16/2018 1:26:41 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	9
Sample Summary	10
Client Sample Results	11
Definitions	30
Chronicle	31
QC Association	36
QC Sample Results	39
Chain of Custody	45
Receipt Checklists	49
Certification Summary	50

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Job ID: 400-156081-1

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-156081-1**

General Chemistry

Method(s) SM 2540C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 404673 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-01

Lab Sample ID: 400-156081-1

No Detections.

Client Sample ID: FERB-01

Lab Sample ID: 400-156081-2

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

Client Sample ID: GWA-1A

Lab Sample ID: 400-156081-4

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
Barium	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0045		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Vanadium	0.0036		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	90		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-156081-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3A

Lab Sample ID: 400-156081-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.056		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00038	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	0.0022	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	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B

Lab Sample ID: 400-156081-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.0		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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-3B (Continued)

Lab Sample ID: 400-156081-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.078		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00053	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0018	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7

Lab Sample ID: 400-156081-8

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
Barium	0.026		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0095		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00066	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.0013		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0032		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	88		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

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
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0065		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-4

Lab Sample ID: 400-156081-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.99		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00086	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0016	J	0.0025	0.0014	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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-4 (Continued)

Lab Sample ID: 400-156081-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	14		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-156081-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	19		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.042	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0015	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00045	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0050		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0089	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-2

Lab Sample ID: 400-156081-12

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	0.073		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.044	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.9		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00097	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
Zinc	0.0067	J	0.020	0.0065	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-4A

Lab Sample ID: 400-156081-13

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	0.76	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.065		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-4A (Continued)

Lab Sample ID: 400-156081-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0029		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00084	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0022	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: DUP-01

Lab Sample ID: 400-156081-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.079		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	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0012	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00047	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0031		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.0078	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-156081-15

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
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-3

Lab Sample ID: 400-156081-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.9		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	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0035		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	56		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-6

Lab Sample ID: 400-156081-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.78	J	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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-6 (Continued)

Lab Sample ID: 400-156081-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		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	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00037	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Vanadium	0.0027		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-5

Lab Sample ID: 400-156081-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.4		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	26		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.64		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00043	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	9.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.011		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.011		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.015	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	290		25	17	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-156081-19

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
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.18	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Vanadium	0.0029		0.0025	0.0014	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-02

Lab Sample ID: 400-156081-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	0.0031		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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-156081-1	FB-01	Water	07/09/18 17:15	07/10/18 09:13
400-156081-2	FERB-01	Water	07/09/18 17:35	07/10/18 09:13
400-156081-4	GWA-1A	Water	07/10/18 09:40	07/11/18 09:21
400-156081-5	GWA-2A	Water	07/10/18 10:15	07/11/18 09:21
400-156081-6	GWA-3A	Water	07/10/18 10:28	07/11/18 09:21
400-156081-7	GWA-3B	Water	07/10/18 11:57	07/11/18 09:21
400-156081-8	GWA-7	Water	07/10/18 12:15	07/11/18 09:21
400-156081-9	GWA-7-FILTERED	Water	07/10/18 12:35	07/11/18 09:21
400-156081-10	GWA-4	Water	07/10/18 13:25	07/11/18 09:21
400-156081-11	GWA-5	Water	07/10/18 14:27	07/11/18 09:21
400-156081-12	GWC-2	Water	07/10/18 15:55	07/11/18 09:21
400-156081-13	GWC-4A	Water	07/10/18 15:55	07/11/18 09:21
400-156081-14	DUP-01	Water	07/10/18 00:00	07/11/18 09:21
400-156081-15	DUP-02	Water	07/10/18 00:00	07/11/18 09:21
400-156081-16	GWC-3	Water	07/10/18 16:40	07/11/18 09:21
400-156081-17	GWC-6	Water	07/11/18 08:45	07/12/18 09:35
400-156081-18	GWC-5	Water	07/11/18 09:17	07/12/18 09:35
400-156081-19	GWC-1	Water	07/11/18 09:25	07/12/18 09:35
400-156081-20	FB-02	Water	07/11/18 16:20	07/12/18 09:35

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-01
Date Collected: 07/09/18 17:15
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/17/18 07:06	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 07:06	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 07:06	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 12:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:53	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 12:53	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 12:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 12:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 12:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 12:53	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 12:53	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 12:53	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			07/12/18 16:50	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: FERB-01

Lab Sample ID: 400-156081-2

Date Collected: 07/09/18 17:35

Matrix: Water

Date Received: 07/10/18 09:13

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			07/17/18 07:29	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 07:29	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 07:29	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 12:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:58	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 12:58	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 12:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 12:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 12:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 12:58	5
Vanadium	0.0020	J	0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 12:58	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 12:58	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			07/12/18 16:50	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-1A

Date Collected: 07/10/18 09:40

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4

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			07/17/18 08:15	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 08:15	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 08:15	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.024		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 13:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:25	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 13:25	5
Calcium	1.7		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 13:25	5
Chromium	0.0045		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 13:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 13:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 13:25	5
Vanadium	0.0036		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 13:25	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 13:25	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	90		5.0	3.4	mg/L			07/12/18 16:50	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-2A

Date Collected: 07/10/18 10:15

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.89	mg/L			07/18/18 15:27	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 15:27	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 15:27	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.042		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 13:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:52	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 13:52	5
Calcium	3.4		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 13:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 13:52	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 13:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 13:52	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 13:52	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 13:52	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-3A
Date Collected: 07/10/18 10:28
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6
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			07/18/18 20:24	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 20:24	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 20:24	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.056		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 13:57	5
Beryllium	0.00038	J	0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 13:57	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 13:57	5
Calcium	1.9		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 13:57	5
Chromium	0.0022	J	0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 13:57	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 13:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 13:57	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 13:57	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 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			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-3B

Date Collected: 07/10/18 11:57

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-7

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		1.0	0.89	mg/L			07/18/18 20:47	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 20:47	1
Sulfate	3.0		1.0	0.70	mg/L			07/18/18 20:47	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.078		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:01	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:01	5
Calcium	1.6		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:01	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:01	5
Lead	0.00053	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:01	5
Vanadium	0.0018	J	0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:01	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:01	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-7

Date Collected: 07/10/18 12:15

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-8

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			07/18/18 21:33	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 21:33	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 21:33	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.026		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:06	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:06	5
Calcium	1.4		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:06	5
Chromium	0.0095		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:06	5
Cobalt	0.00066	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:06	5
Lead	0.0013		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:06	5
Vanadium	0.0032		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:06	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:06	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

Date Collected: 07/10/18 12:35

Matrix: Water

Date Received: 07/11/18 09:21

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			07/18/18 22:41	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 22:41	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 22:41	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.016		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:10	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:10	5
Calcium	1.1		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:10	5
Chromium	0.0065		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:10	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:10	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	54		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-4

Date Collected: 07/10/18 13:25

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.89	mg/L			07/18/18 23:04	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 23:04	1
Sulfate	3.4		1.0	0.70	mg/L			07/18/18 23:04	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.043		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:15	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:15	5
Calcium	0.99		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:15	5
Cobalt	0.00086	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:15	5
Vanadium	0.0016	J	0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:15	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:15	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-5

Date Collected: 07/10/18 14:27

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-11

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		1.0	0.89	mg/L			07/18/18 23:27	1
Fluoride	0.17	J	0.20	0.082	mg/L			07/18/18 23:27	1
Sulfate	19		1.0	0.70	mg/L			07/18/18 23:27	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.14		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:19	5
Boron	0.042	J	0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:19	5
Calcium	3.7		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:19	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:19	5
Cobalt	0.0015	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:19	5
Lead	0.00045	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:19	5
Vanadium	0.0050		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:19	5
Zinc	0.0089	J	0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:19	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	76		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-2
Date Collected: 07/10/18 15:55
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-12
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			07/18/18 23:50	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 23:50	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 23:50	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.073		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:24	5
Boron	0.044	J	0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:24	5
Calcium	3.9		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:24	5
Chromium	0.0033		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:24	5
Cobalt	0.00097	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:24	5
Vanadium	0.0018	J	0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:24	5
Zinc	0.0067	J	0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:24	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-4A

Date Collected: 07/10/18 15:55

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-13

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			07/19/18 00:13	1
Fluoride	<0.082		0.20	0.082	mg/L			07/19/18 00:13	1
Sulfate	0.76	J	1.0	0.70	mg/L			07/19/18 00:13	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.065		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:28	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:28	5
Calcium	2.0		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:28	5
Chromium	0.0029		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:28	5
Cobalt	0.00084	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:28	5
Vanadium	0.0022	J	0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:28	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:28	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	26		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: DUP-01

Date Collected: 07/10/18 00:00

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-14

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.89	mg/L			07/17/18 10:09	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 10:09	1
Sulfate	2.8		1.0	0.70	mg/L			07/17/18 10:09	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.079		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:33	5
Boron	0.021	J	0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:33	5
Calcium	1.7		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:33	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:33	5
Lead	0.00047	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:33	5
Vanadium	0.0031		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:33	5
Zinc	0.0078	J	0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:33	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			07/12/18 16:50	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: DUP-02

Date Collected: 07/10/18 00:00

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-15

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			07/17/18 10:32	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 10:32	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 10:32	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 14:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 14:59	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 14:59	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 14:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 14:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 14:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 14:59	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 14:59	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 14:59	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			07/12/18 16:50	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-3

Date Collected: 07/10/18 16:40

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-16

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.9		1.0	0.89	mg/L			07/19/18 00:36	1
Fluoride	<0.082		0.20	0.082	mg/L			07/19/18 00:36	1
Sulfate	<0.70		1.0	0.70	mg/L			07/19/18 00:36	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.040		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:04	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:04	5
Calcium	2.1		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:04	5
Chromium	0.0035		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:04	5
Cobalt	0.00053	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:04	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 15:04	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 15:04	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56		5.0	3.4	mg/L			07/16/18 11:22	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-6

Date Collected: 07/11/18 08:45

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-17

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.2		1.0	0.89	mg/L			07/17/18 10:55	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 10:55	1
Sulfate	0.78	J	1.0	0.70	mg/L			07/17/18 10:55	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.051		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:08	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:08	5
Calcium	1.6		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:08	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:08	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:08	5
Lead	0.00037	J	0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:08	5
Vanadium	0.0027		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 15:08	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 15:08	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			07/17/18 12:57	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-5

Date Collected: 07/11/18 09:17

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-18

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		1.0	0.89	mg/L			07/19/18 08:58	1
Fluoride	0.37		0.20	0.082	mg/L			07/19/18 08:58	1
Sulfate	26		1.0	0.70	mg/L			07/19/18 08:58	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.64		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:13	5
Beryllium	0.00043	J	0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:13	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:13	5
Calcium	9.6		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:13	5
Cobalt	0.011		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:13	5
Vanadium	0.011		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 15:13	5
Zinc	0.015	J	0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 15:13	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	290		25	17	mg/L			07/17/18 12:57	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-1

Date Collected: 07/11/18 09:25

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19

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			07/17/18 11:18	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 11:18	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 11:18	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.016		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:17	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:17	5
Calcium	0.18	J	0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:17	5
Vanadium	0.0029		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 15:17	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 15:17	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	32		5.0	3.4	mg/L			07/17/18 12:57	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-02
Date Collected: 07/11/18 16:20
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-20
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			07/17/18 14:20	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 14:20	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 14:20	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 15:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 15:22	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 15:22	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 15:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 15:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 15:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 15:22	5
Vanadium	0.0031		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 15:22	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 15:22	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/17/18 12:57	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

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.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-01
Date Collected: 07/09/18 17:15
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 07:06	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 12:53	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN

Client Sample ID: FERB-01
Date Collected: 07/09/18 17:35
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 07:29	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 12:58	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN

Client Sample ID: GWA-1A
Date Collected: 07/10/18 09:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 08:15	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:25	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN

Client Sample ID: GWA-2A
Date Collected: 07/10/18 10:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 15:27	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:52	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWA-3A
Date Collected: 07/10/18 10:28
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 20:24	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-3A

Date Collected: 07/10/18 10:28

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:57	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWA-3B

Date Collected: 07/10/18 11:57

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 20:47	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:01	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWA-7

Date Collected: 07/10/18 12:15

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 21:33	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:06	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWA-7-FILTERED

Date Collected: 07/10/18 12:35

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 22:41	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:10	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWA-4

Date Collected: 07/10/18 13:25

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 23:04	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:15	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-5

Lab Sample ID: 400-156081-11

Date Collected: 07/10/18 14:27

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 23:27	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:19	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWC-2

Lab Sample ID: 400-156081-12

Date Collected: 07/10/18 15:55

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/18/18 23:50	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:24	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWC-4A

Lab Sample ID: 400-156081-13

Date Collected: 07/10/18 15:55

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/19/18 00:13	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:28	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: DUP-01

Lab Sample ID: 400-156081-14

Date Collected: 07/10/18 00:00

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 10:09	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:33	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN

Client Sample ID: DUP-02

Lab Sample ID: 400-156081-15

Date Collected: 07/10/18 00:00

Matrix: Water

Date Received: 07/11/18 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 10:32	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: DUP-02

Date Collected: 07/10/18 00:00

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:59	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404278	07/12/18 16:50	RRC	TAL PEN

Client Sample ID: GWC-3

Date Collected: 07/10/18 16:40

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404938	07/19/18 00:36	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:04	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404518	07/16/18 11:22	RRC	TAL PEN

Client Sample ID: GWC-6

Date Collected: 07/11/18 08:45

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 10:55	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:08	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN

Client Sample ID: GWC-5

Date Collected: 07/11/18 09:17

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404990	07/19/18 08:58	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:13	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN

Client Sample ID: GWC-1

Date Collected: 07/11/18 09:25

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 11:18	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:17	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-02

Lab Sample ID: 400-156081-20

Date Collected: 07/11/18 16:20

Matrix: Water

Date Received: 07/12/18 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	404690	07/17/18 14:20	JAW	TAL PEN
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:22	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	404673	07/17/18 12:57	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

HPLC/IC

Analysis Batch: 404690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	300.0	
400-156081-2	FERB-01	Total/NA	Water	300.0	
400-156081-4	GWA-1A	Total/NA	Water	300.0	
400-156081-14	DUP-01	Total/NA	Water	300.0	
400-156081-15	DUP-02	Total/NA	Water	300.0	
400-156081-17	GWC-6	Total/NA	Water	300.0	
400-156081-19	GWC-1	Total/NA	Water	300.0	
400-156081-20	FB-02	Total/NA	Water	300.0	
MB 400-404690/36	Method Blank	Total/NA	Water	300.0	
LCS 400-404690/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-404690/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-156002-A-8 MS	Matrix Spike	Total/NA	Water	300.0	
400-156002-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 404938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-5	GWA-2A	Total/NA	Water	300.0	
400-156081-6	GWA-3A	Total/NA	Water	300.0	
400-156081-7	GWA-3B	Total/NA	Water	300.0	
400-156081-8	GWA-7	Total/NA	Water	300.0	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	300.0	
400-156081-10	GWA-4	Total/NA	Water	300.0	
400-156081-11	GWA-5	Total/NA	Water	300.0	
400-156081-12	GWC-2	Total/NA	Water	300.0	
400-156081-13	GWC-4A	Total/NA	Water	300.0	
400-156081-16	GWC-3	Total/NA	Water	300.0	
MB 400-404938/4	Method Blank	Total/NA	Water	300.0	
LCS 400-404938/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-404938/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-156081-5 MS	GWA-2A	Total/NA	Water	300.0	
400-156081-5 MSD	GWA-2A	Total/NA	Water	300.0	

Analysis Batch: 404990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-18	GWC-5	Total/NA	Water	300.0	
MB 400-404990/34	Method Blank	Total/NA	Water	300.0	
LCS 400-404990/35	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-404990/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-156356-C-2 MS	Matrix Spike	Total/NA	Water	300.0	
400-156356-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 404552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total Recoverable	Water	3005A	
400-156081-2	FERB-01	Total Recoverable	Water	3005A	
400-156081-4	GWA-1A	Total Recoverable	Water	3005A	
400-156081-5	GWA-2A	Total Recoverable	Water	3005A	
400-156081-6	GWA-3A	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Metals (Continued)

Prep Batch: 404552 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-7	GWA-3B	Total Recoverable	Water	3005A	
400-156081-8	GWA-7	Total Recoverable	Water	3005A	
400-156081-9	GWA-7-FILTERED	Total Recoverable	Water	3005A	
400-156081-10	GWA-4	Total Recoverable	Water	3005A	
400-156081-11	GWA-5	Total Recoverable	Water	3005A	
400-156081-12	GWC-2	Total Recoverable	Water	3005A	
400-156081-13	GWC-4A	Total Recoverable	Water	3005A	
400-156081-14	DUP-01	Total Recoverable	Water	3005A	
400-156081-15	DUP-02	Total Recoverable	Water	3005A	
400-156081-16	GWC-3	Total Recoverable	Water	3005A	
400-156081-17	GWC-6	Total Recoverable	Water	3005A	
400-156081-18	GWC-5	Total Recoverable	Water	3005A	
400-156081-19	GWC-1	Total Recoverable	Water	3005A	
400-156081-20	FB-02	Total Recoverable	Water	3005A	
MB 400-404552/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-404552/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-156081-B-3-B MS ^5	400-156081-B-3-B MS ^5	Total Recoverable	Water	3005A	
400-156081-B-3-C MSD ^5	400-156081-B-3-C MSD ^5	Total Recoverable	Water	3005A	

Analysis Batch: 404861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total Recoverable	Water	6020	404552
400-156081-2	FERB-01	Total Recoverable	Water	6020	404552
400-156081-4	GWA-1A	Total Recoverable	Water	6020	404552
400-156081-5	GWA-2A	Total Recoverable	Water	6020	404552
400-156081-6	GWA-3A	Total Recoverable	Water	6020	404552
400-156081-7	GWA-3B	Total Recoverable	Water	6020	404552
400-156081-8	GWA-7	Total Recoverable	Water	6020	404552
400-156081-9	GWA-7-FILTERED	Total Recoverable	Water	6020	404552
400-156081-10	GWA-4	Total Recoverable	Water	6020	404552
400-156081-11	GWA-5	Total Recoverable	Water	6020	404552
400-156081-12	GWC-2	Total Recoverable	Water	6020	404552
400-156081-13	GWC-4A	Total Recoverable	Water	6020	404552
400-156081-14	DUP-01	Total Recoverable	Water	6020	404552
400-156081-15	DUP-02	Total Recoverable	Water	6020	404552
400-156081-16	GWC-3	Total Recoverable	Water	6020	404552
400-156081-17	GWC-6	Total Recoverable	Water	6020	404552
400-156081-18	GWC-5	Total Recoverable	Water	6020	404552
400-156081-19	GWC-1	Total Recoverable	Water	6020	404552
400-156081-20	FB-02	Total Recoverable	Water	6020	404552
MB 400-404552/1-A ^5	Method Blank	Total Recoverable	Water	6020	404552
LCS 400-404552/2-A	Lab Control Sample	Total Recoverable	Water	6020	404552
400-156081-B-3-B MS ^5	400-156081-B-3-B MS ^5	Total Recoverable	Water	6020	404552
400-156081-B-3-C MSD ^5	400-156081-B-3-C MSD ^5	Total Recoverable	Water	6020	404552

General Chemistry

Analysis Batch: 404278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

General Chemistry (Continued)

Analysis Batch: 404278 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-2	FERB-01	Total/NA	Water	SM 2540C	
400-156081-4	GWA-1A	Total/NA	Water	SM 2540C	
400-156081-14	DUP-01	Total/NA	Water	SM 2540C	
400-156081-15	DUP-02	Total/NA	Water	SM 2540C	
MB 400-404278/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-404278/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156081-4 DU	GWA-1A	Total/NA	Water	SM 2540C	
400-156081-A-3 DU	400-156081-A-3 DU	Total/NA	Water	SM 2540C	

Analysis Batch: 404518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-5	GWA-2A	Total/NA	Water	SM 2540C	
400-156081-6	GWA-3A	Total/NA	Water	SM 2540C	
400-156081-7	GWA-3B	Total/NA	Water	SM 2540C	
400-156081-8	GWA-7	Total/NA	Water	SM 2540C	
400-156081-9	GWA-7-FILTERED	Total/NA	Water	SM 2540C	
400-156081-10	GWA-4	Total/NA	Water	SM 2540C	
400-156081-11	GWA-5	Total/NA	Water	SM 2540C	
400-156081-12	GWC-2	Total/NA	Water	SM 2540C	
400-156081-13	GWC-4A	Total/NA	Water	SM 2540C	
400-156081-16	GWC-3	Total/NA	Water	SM 2540C	
MB 400-404518/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-404518/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156081-5 DU	GWA-2A	Total/NA	Water	SM 2540C	
400-156081-11 DU	GWA-5	Total/NA	Water	SM 2540C	

Analysis Batch: 404673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-17	GWC-6	Total/NA	Water	SM 2540C	
400-156081-18	GWC-5	Total/NA	Water	SM 2540C	
400-156081-19	GWC-1	Total/NA	Water	SM 2540C	
400-156081-20	FB-02	Total/NA	Water	SM 2540C	
MB 400-404673/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-404673/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156081-19 DU	GWC-1	Total/NA	Water	SM 2540C	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-404690/36
Matrix: Water
Analysis Batch: 404690

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			07/17/18 04:49	1
Fluoride	<0.082		0.20	0.082	mg/L			07/17/18 04:49	1
Sulfate	<0.70		1.0	0.70	mg/L			07/17/18 04:49	1

Lab Sample ID: LCS 400-404690/37
Matrix: Water
Analysis Batch: 404690

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	9.35		mg/L		94	90 - 110
Fluoride	10.0	9.96		mg/L		100	90 - 110
Sulfate	10.0	9.72		mg/L		97	90 - 110

Lab Sample ID: LCSD 400-404690/38
Matrix: Water
Analysis Batch: 404690

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	9.34		mg/L		93	90 - 110	0	15
Fluoride	10.0	9.90		mg/L		99	90 - 110	1	15
Sulfate	10.0	9.81		mg/L		98	90 - 110	1	15

Lab Sample ID: 400-156002-A-8 MS
Matrix: Water
Analysis Batch: 404690

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	77	E	10.0	84.6	E 4	mg/L		76	80 - 120
Fluoride	<0.082		10.0	10.4		mg/L		104	80 - 120
Sulfate	6.6		10.0	16.8		mg/L		102	80 - 120

Lab Sample ID: 400-156002-A-8 MSD
Matrix: Water
Analysis Batch: 404690

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	77	E	10.0	84.9	E 4	mg/L		79	80 - 120	0	20
Fluoride	<0.082		10.0	10.3		mg/L		103	80 - 120	1	20
Sulfate	6.6		10.0	16.9		mg/L		103	80 - 120	1	20

Lab Sample ID: MB 400-404938/4
Matrix: Water
Analysis Batch: 404938

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			07/18/18 14:19	1
Fluoride	<0.082		0.20	0.082	mg/L			07/18/18 14:19	1
Sulfate	<0.70		1.0	0.70	mg/L			07/18/18 14:19	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-404938/5
Matrix: Water
Analysis Batch: 404938

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	9.19		mg/L		92	90 - 110
Fluoride	10.0	9.54		mg/L		95	90 - 110
Sulfate	10.0	9.64		mg/L		96	90 - 110

Lab Sample ID: LCSD 400-404938/6
Matrix: Water
Analysis Batch: 404938

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	9.18		mg/L		92	90 - 110	0	15
Fluoride	10.0	9.48		mg/L		95	90 - 110	1	15
Sulfate	10.0	9.51		mg/L		95	90 - 110	1	15

Lab Sample ID: 400-156081-5 MS
Matrix: Water
Analysis Batch: 404938

Client Sample ID: GWA-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		10.0	21.7		mg/L		93	80 - 120
Fluoride	<0.082		10.0	9.95		mg/L		100	80 - 120
Sulfate	<0.70		10.0	10.3		mg/L		103	80 - 120

Lab Sample ID: 400-156081-5 MSD
Matrix: Water
Analysis Batch: 404938

Client Sample ID: GWA-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		10.0	21.8		mg/L		94	80 - 120	0	20
Fluoride	<0.082		10.0	9.96		mg/L		100	80 - 120	0	20
Sulfate	<0.70		10.0	10.2		mg/L		102	80 - 120	1	20

Lab Sample ID: MB 400-404990/34
Matrix: Water
Analysis Batch: 404990

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			07/19/18 01:44	1
Fluoride	<0.082		0.20	0.082	mg/L			07/19/18 01:44	1
Sulfate	<0.70		1.0	0.70	mg/L			07/19/18 01:44	1

Lab Sample ID: LCS 400-404990/35
Matrix: Water
Analysis Batch: 404990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.25		mg/L		93	90 - 110
Fluoride	10.0	9.72		mg/L		97	90 - 110
Sulfate	10.0	9.78		mg/L		98	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-404990/36
Matrix: Water
Analysis Batch: 404990

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	9.21		mg/L		92	90 - 110	0	15
Fluoride	10.0	9.71		mg/L		97	90 - 110	0	15
Sulfate	10.0	9.64		mg/L		96	90 - 110	1	15

Lab Sample ID: 400-156356-C-2 MS
Matrix: Water
Analysis Batch: 404990

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	58	E	10.0	65.9	E 4	mg/L		82	80 - 120
Fluoride	0.23		10.0	10.3		mg/L		100	80 - 120
Sulfate	9.6		10.0	19.7		mg/L		101	80 - 120

Lab Sample ID: 400-156356-C-2 MSD
Matrix: Water
Analysis Batch: 404990

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	58	E	10.0	65.9	E 4	mg/L		83	80 - 120	0	20
Fluoride	0.23		10.0	10.2		mg/L		100	80 - 120	1	20
Sulfate	9.6		10.0	19.8		mg/L		102	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-404552/1-A ^5
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/16/18 09:19	07/17/18 12:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/16/18 09:19	07/17/18 12:40	5
Boron	<0.021		0.050	0.021	mg/L		07/16/18 09:19	07/17/18 12:40	5
Calcium	<0.13		0.25	0.13	mg/L		07/16/18 09:19	07/17/18 12:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/16/18 09:19	07/17/18 12:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/16/18 09:19	07/17/18 12:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/16/18 09:19	07/17/18 12:40	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		07/16/18 09:19	07/17/18 12:40	5
Zinc	<0.0065		0.020	0.0065	mg/L		07/16/18 09:19	07/17/18 12:40	5

Lab Sample ID: LCS 400-404552/2-A
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0500	0.0529		mg/L		106	80 - 120
Beryllium	0.0500	0.0511		mg/L		102	80 - 120
Boron	0.100	0.102		mg/L		102	80 - 120
Calcium	5.00	5.11		mg/L		102	80 - 120
Chromium	0.0500	0.0507		mg/L		101	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-404552/2-A
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.0541		mg/L		108	80 - 120
Lead	0.0500	0.0522		mg/L		104	80 - 120
Vanadium	0.0500	0.0500		mg/L		100	80 - 120
Zinc	0.0500	0.0519		mg/L		104	80 - 120

Lab Sample ID: 400-156081-B-3-B MS ^5
Matrix: Water
Analysis Batch: 404861

Client Sample ID: 400-156081-B-3-B MS ^5
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.027		0.0500	0.0830		mg/L		112	75 - 125
Beryllium	<0.00034		0.0500	0.0527		mg/L		105	75 - 125
Boron	<0.021		0.100	0.118		mg/L		118	75 - 125
Calcium	1.3		5.00	6.60		mg/L		105	75 - 125
Chromium	0.0063		0.0500	0.0587		mg/L		105	75 - 125
Cobalt	0.00048	J	0.0500	0.0562		mg/L		111	75 - 125
Lead	0.00055	J	0.0500	0.0540		mg/L		107	75 - 125
Vanadium	0.0061		0.0500	0.0578		mg/L		104	75 - 125
Zinc	<0.0065		0.0500	0.0577		mg/L		115	75 - 125

Lab Sample ID: 400-156081-B-3-C MSD ^5
Matrix: Water
Analysis Batch: 404861

Client Sample ID: 400-156081-B-3-C MSD ^5
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Barium	0.027		0.0500	0.0828		mg/L		112	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0518		mg/L		104	75 - 125	2	20
Boron	<0.021		0.100	0.115		mg/L		115	75 - 125	3	20
Calcium	1.3		5.00	6.52		mg/L		104	75 - 125	1	20
Chromium	0.0063		0.0500	0.0591		mg/L		106	75 - 125	1	20
Cobalt	0.00048	J	0.0500	0.0565		mg/L		112	75 - 125	1	20
Lead	0.00055	J	0.0500	0.0532		mg/L		105	75 - 125	1	20
Vanadium	0.0061		0.0500	0.0573		mg/L		103	75 - 125	1	20
Zinc	<0.0065		0.0500	0.0584		mg/L		117	75 - 125	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-404278/1
Matrix: Water
Analysis Batch: 404278

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			07/12/18 16:50	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
SDG: Ash Landfill #3 - Compliance

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 400-404278/2
Matrix: Water
Analysis Batch: 404278

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: 400-156081-4 DU
Matrix: Water
Analysis Batch: 404278

Client Sample ID: GWA-1A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	90		90.0		mg/L		0	5

Lab Sample ID: 400-156081-A-3 DU
Matrix: Water
Analysis Batch: 404278

Client Sample ID: 400-156081-A-3 DU
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		2	5

Lab Sample ID: MB 400-404518/1
Matrix: Water
Analysis Batch: 404518

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/16/18 11:22	1

Lab Sample ID: LCS 400-404518/2
Matrix: Water
Analysis Batch: 404518

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	268		mg/L		91	78 - 122

Lab Sample ID: 400-156081-5 DU
Matrix: Water
Analysis Batch: 404518

Client Sample ID: GWA-2A
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

Lab Sample ID: 400-156081-11 DU
Matrix: Water
Analysis Batch: 404518

Client Sample ID: GWA-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	76		76.0		mg/L		0	5

Lab Sample ID: MB 400-404673/1
Matrix: Water
Analysis Batch: 404673

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			07/17/18 12:57	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

Lab Sample ID: LCS 400-404673/2
Matrix: Water
Analysis Batch: 404673

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: 400-156081-19 DU
Matrix: Water
Analysis Batch: 404673

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	32		36.0	F3	mg/L		12	5


- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

TestAmerica Pensacola

3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record



Client Information		Sampler: <u>W. Niles, L. Coker, J. Adcock</u>		Lab PM: <u>Whitmire, Cheyenne R</u>		Carrier Tracking No(s):		COC No:		
Client Contact: <u>Ms. Lauren Petty</u>		Phone: <u>678 467 9260</u>		E-Mail: <u>cheyenne.whitmire@testamericainc.com</u>				Page <u>1 of 2</u>		
Company: <u>Southern Company</u>		Due Date Requested:		Analysis Requested		Total Number of Containers 		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)		
Address: <u>PO BOX 2641 GSC8</u>		TAT Requested (days):								
City: <u>Birmingham</u>		Standard								
State, Zip: <u>AL, 35291</u>										
Phone: <u>205-992-5417(Tel)</u>		PO #: <u>SCS10347656</u>		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No)		2640C - TDS, 300_ORGFM_280 - Chloride, Fluoride & Sulfate 6020 - B, Ba, Be, Ca, Co, Cr, Pb, V, Zn				
Email: <u>lmpetty@southernco.com</u>		WO #:								
Project Name: <u>CCR - Plant McIntosh Ash Landfill #3</u>		Project #: <u>40007700</u>								
Site:		SSOW#:								
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=onwater, A=air)	Preservation Code:		Special Instructions/Note:		
<u>GWA-1A</u>		<u>7/10/18</u>	<u>9:40</u>	<u>G</u>	<u>W</u>	<u>N</u>	<u>N</u>	<u>X</u>	<u>X</u>	Compliance
<u>GWA-2A</u>			<u>10:15</u>							
<u>GWA-3A</u>			<u>10:23</u>							
<u>GWA-3B</u>			<u>11:57</u>							
<u>GWA-7</u>			<u>12:15</u>							
<u>GWA-7 - f. filtercd</u>			<u>12:35</u>			<u>Y</u>				
<u>GWA-4</u>			<u>13:25</u>			<u>N</u>				
<u>GWA-5</u>			<u>14:27</u>							
<u>GWC-2</u>			<u>15:55</u>							
<u>GWC-4A</u>			<u>15:55</u>							
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:			
Relinquished by: <u>Lauren Petty</u>			Date/Time: <u>7/10/18 19:00</u>		Company:		Received by: <u>[Signature]</u>		Date/Time: <u>7-11-18 0821</u>	Company: <u>TA Pen</u>
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:	Company:
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:	Company:
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>2.3°C IR7, 2.3°C IR7</u>						

Page 46 of 50

8/16/2018



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156081-1
SDG Number: Ash Landfill #3 - Compliance

Login Number: 156081

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-7, 2.3°C, 2.3°C IR-7, 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 <6mm (1/4").	True	
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: 400-156081-1
 SDG: Ash Landfill #3 - Compliance

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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* 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: 400-156081-3

TestAmerica SDG: Ash Landfill #3 - Compliance

Client Project/Site: CCR - Plant McIntosh

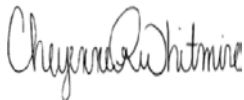
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/24/2018 6:51:37 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Detection Summary	3
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	10
Chronicle	11
QC Association	15
QC Sample Results	16
Chain of Custody	17
Receipt Checklists	21
Certification Summary	22

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-01

Lab Sample ID: 400-156081-1

No Detections.

Client Sample ID: FERB-01

Lab Sample ID: 400-156081-2

No Detections.

Client Sample ID: GWA-1

Lab Sample ID: 400-156081-3

No Detections.

Client Sample ID: GWA-1A

Lab Sample ID: 400-156081-4

No Detections.

Client Sample ID: GWA-2A

Lab Sample ID: 400-156081-5

No Detections.

Client Sample ID: GWA-3A

Lab Sample ID: 400-156081-6

No Detections.

Client Sample ID: GWA-3B

Lab Sample ID: 400-156081-7

No Detections.

Client Sample ID: GWA-7

Lab Sample ID: 400-156081-8

No Detections.

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-156081-9

No Detections.

Client Sample ID: GWA-4

Lab Sample ID: 400-156081-10

No Detections.

Client Sample ID: GWA-5

Lab Sample ID: 400-156081-11

No Detections.

Client Sample ID: GWC-2

Lab Sample ID: 400-156081-12

No Detections.

Client Sample ID: GWC-4A

Lab Sample ID: 400-156081-13

No Detections.

Client Sample ID: DUP-01

Lab Sample ID: 400-156081-14

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: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: DUP-02

Lab Sample ID: 400-156081-15

No Detections.

Client Sample ID: GWC-3

Lab Sample ID: 400-156081-16

No Detections.

Client Sample ID: GWC-6

Lab Sample ID: 400-156081-17

No Detections.

Client Sample ID: GWC-5

Lab Sample ID: 400-156081-18

No Detections.

Client Sample ID: GWC-1

Lab Sample ID: 400-156081-19

No Detections.

Client Sample ID: FB-02

Lab Sample ID: 400-156081-20

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: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN

Protocol References:

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: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-156081-1	FB-01	Water	07/09/18 17:15	07/10/18 09:13
400-156081-2	FERB-01	Water	07/09/18 17:35	07/10/18 09:13
400-156081-3	GWA-1	Water	07/09/18 16:40	07/10/18 09:13
400-156081-4	GWA-1A	Water	07/10/18 09:40	07/11/18 09:21
400-156081-5	GWA-2A	Water	07/10/18 10:15	07/11/18 09:21
400-156081-6	GWA-3A	Water	07/10/18 10:28	07/11/18 09:21
400-156081-7	GWA-3B	Water	07/10/18 11:57	07/11/18 09:21
400-156081-8	GWA-7	Water	07/10/18 12:15	07/11/18 09:21
400-156081-9	GWA-7-FILTERED	Water	07/10/18 12:35	07/11/18 09:21
400-156081-10	GWA-4	Water	07/10/18 13:25	07/11/18 09:21
400-156081-11	GWA-5	Water	07/10/18 14:27	07/11/18 09:21
400-156081-12	GWC-2	Water	07/10/18 15:55	07/11/18 09:21
400-156081-13	GWC-4A	Water	07/10/18 15:55	07/11/18 09:21
400-156081-14	DUP-01	Water	07/10/18 00:00	07/11/18 09:21
400-156081-15	DUP-02	Water	07/10/18 00:00	07/11/18 09:21
400-156081-16	GWC-3	Water	07/10/18 16:40	07/11/18 09:21
400-156081-17	GWC-6	Water	07/11/18 08:45	07/12/18 09:35
400-156081-18	GWC-5	Water	07/11/18 09:17	07/12/18 09:35
400-156081-19	GWC-1	Water	07/11/18 09:25	07/12/18 09:35
400-156081-20	FB-02	Water	07/11/18 16:20	07/12/18 09:35

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-01
Date Collected: 07/09/18 17:15
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 12:53	5

Client Sample ID: FERB-01
Date Collected: 07/09/18 17:35
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 12:58	5

Client Sample ID: GWA-1
Date Collected: 07/09/18 16:40
Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 13:02	5

Client Sample ID: GWA-1A
Date Collected: 07/10/18 09:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 13:25	5

Client Sample ID: GWA-2A
Date Collected: 07/10/18 10:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 13:52	5

Client Sample ID: GWA-3A
Date Collected: 07/10/18 10:28
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 13:57	5

Client Sample ID: GWA-3B
Date Collected: 07/10/18 11:57
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 14:01	5

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-7
Date Collected: 07/10/18 12:15
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:06	5

Client Sample ID: GWA-7-FILTERED
Date Collected: 07/10/18 12:35
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:10	5

Client Sample ID: GWA-4
Date Collected: 07/10/18 13:25
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-10
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:15	5

Client Sample ID: GWA-5
Date Collected: 07/10/18 14:27
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:19	5

Client Sample ID: GWC-2
Date Collected: 07/10/18 15:55
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:24	5

Client Sample ID: GWC-4A
Date Collected: 07/10/18 15:55
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-13
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:28	5

Client Sample ID: DUP-01
Date Collected: 07/10/18 00:00
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-14
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L	-	07/16/18 09:19	07/17/18 14:33	5

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: DUP-02
Date Collected: 07/10/18 00:00
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-15
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 14:59	5

Client Sample ID: GWC-3
Date Collected: 07/10/18 16:40
Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-16
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 15:04	5

Client Sample ID: GWC-6
Date Collected: 07/11/18 08:45
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-17
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 15:08	5

Client Sample ID: GWC-5
Date Collected: 07/11/18 09:17
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-18
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 15:13	5

Client Sample ID: GWC-1
Date Collected: 07/11/18 09:25
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 15:17	5

Client Sample ID: FB-02
Date Collected: 07/11/18 16:20
Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-20
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 15:22	5

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

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: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: FB-01

Date Collected: 07/09/18 17:15

Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 12:53	DRE	TAL PEN

Client Sample ID: FERB-01

Date Collected: 07/09/18 17:35

Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 12:58	DRE	TAL PEN

Client Sample ID: GWA-1

Date Collected: 07/09/18 16:40

Date Received: 07/10/18 09:13

Lab Sample ID: 400-156081-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:02	DRE	TAL PEN

Client Sample ID: GWA-1A

Date Collected: 07/10/18 09:40

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:25	DRE	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 07/10/18 10:15

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:52	DRE	TAL PEN

Client Sample ID: GWA-3A

Date Collected: 07/10/18 10:28

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 13:57	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWA-3B

Date Collected: 07/10/18 11:57

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:01	DRE	TAL PEN

Client Sample ID: GWA-7

Date Collected: 07/10/18 12:15

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:06	DRE	TAL PEN

Client Sample ID: GWA-7-FILTERED

Date Collected: 07/10/18 12:35

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:10	DRE	TAL PEN

Client Sample ID: GWA-4

Date Collected: 07/10/18 13:25

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:15	DRE	TAL PEN

Client Sample ID: GWA-5

Date Collected: 07/10/18 14:27

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:19	DRE	TAL PEN

Client Sample ID: GWC-2

Date Collected: 07/10/18 15:55

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:24	DRE	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-4A

Date Collected: 07/10/18 15:55

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:28	DRE	TAL PEN

Client Sample ID: DUP-01

Date Collected: 07/10/18 00:00

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:33	DRE	TAL PEN

Client Sample ID: DUP-02

Date Collected: 07/10/18 00:00

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 14:59	DRE	TAL PEN

Client Sample ID: GWC-3

Date Collected: 07/10/18 16:40

Date Received: 07/11/18 09:21

Lab Sample ID: 400-156081-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:04	DRE	TAL PEN

Client Sample ID: GWC-6

Date Collected: 07/11/18 08:45

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:08	DRE	TAL PEN

Client Sample ID: GWC-5

Date Collected: 07/11/18 09:17

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:13	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
SDG: Ash Landfill #3 - Compliance

Client Sample ID: GWC-1

Date Collected: 07/11/18 09:25

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:17	DRE	TAL PEN

Client Sample ID: FB-02

Date Collected: 07/11/18 16:20

Date Received: 07/12/18 09:35

Lab Sample ID: 400-156081-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			404552	07/16/18 09:19	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	404861	07/17/18 15:22	DRE	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: 400-156081-3
 SDG: Ash Landfill #3 - Compliance

Metals

Prep Batch: 404552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total Recoverable	Water	3005A	
400-156081-2	FERB-01	Total Recoverable	Water	3005A	
400-156081-3	GWA-1	Total Recoverable	Water	3005A	
400-156081-4	GWA-1A	Total Recoverable	Water	3005A	
400-156081-5	GWA-2A	Total Recoverable	Water	3005A	
400-156081-6	GWA-3A	Total Recoverable	Water	3005A	
400-156081-7	GWA-3B	Total Recoverable	Water	3005A	
400-156081-8	GWA-7	Total Recoverable	Water	3005A	
400-156081-9	GWA-7-FILTERED	Total Recoverable	Water	3005A	
400-156081-10	GWA-4	Total Recoverable	Water	3005A	
400-156081-11	GWA-5	Total Recoverable	Water	3005A	
400-156081-12	GWC-2	Total Recoverable	Water	3005A	
400-156081-13	GWC-4A	Total Recoverable	Water	3005A	
400-156081-14	DUP-01	Total Recoverable	Water	3005A	
400-156081-15	DUP-02	Total Recoverable	Water	3005A	
400-156081-16	GWC-3	Total Recoverable	Water	3005A	
400-156081-17	GWC-6	Total Recoverable	Water	3005A	
400-156081-18	GWC-5	Total Recoverable	Water	3005A	
400-156081-19	GWC-1	Total Recoverable	Water	3005A	
400-156081-20	FB-02	Total Recoverable	Water	3005A	
MB 400-404552/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-404552/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-156081-3 MS	GWA-1	Total Recoverable	Water	3005A	
400-156081-3 MSD	GWA-1	Total Recoverable	Water	3005A	

Analysis Batch: 404861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156081-1	FB-01	Total Recoverable	Water	6020	404552
400-156081-2	FERB-01	Total Recoverable	Water	6020	404552
400-156081-3	GWA-1	Total Recoverable	Water	6020	404552
400-156081-4	GWA-1A	Total Recoverable	Water	6020	404552
400-156081-5	GWA-2A	Total Recoverable	Water	6020	404552
400-156081-6	GWA-3A	Total Recoverable	Water	6020	404552
400-156081-7	GWA-3B	Total Recoverable	Water	6020	404552
400-156081-8	GWA-7	Total Recoverable	Water	6020	404552
400-156081-9	GWA-7-FILTERED	Total Recoverable	Water	6020	404552
400-156081-10	GWA-4	Total Recoverable	Water	6020	404552
400-156081-11	GWA-5	Total Recoverable	Water	6020	404552
400-156081-12	GWC-2	Total Recoverable	Water	6020	404552
400-156081-13	GWC-4A	Total Recoverable	Water	6020	404552
400-156081-14	DUP-01	Total Recoverable	Water	6020	404552
400-156081-15	DUP-02	Total Recoverable	Water	6020	404552
400-156081-16	GWC-3	Total Recoverable	Water	6020	404552
400-156081-17	GWC-6	Total Recoverable	Water	6020	404552
400-156081-18	GWC-5	Total Recoverable	Water	6020	404552
400-156081-19	GWC-1	Total Recoverable	Water	6020	404552
400-156081-20	FB-02	Total Recoverable	Water	6020	404552
MB 400-404552/1-A ^5	Method Blank	Total Recoverable	Water	6020	404552
LCS 400-404552/2-A	Lab Control Sample	Total Recoverable	Water	6020	404552
400-156081-3 MS	GWA-1	Total Recoverable	Water	6020	404552
400-156081-3 MSD	GWA-1	Total Recoverable	Water	6020	404552

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-156081-3
 SDG: Ash Landfill #3 - Compliance

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-404552/1-A ^5
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.0021		0.0025	0.0021	mg/L		07/16/18 09:19	07/17/18 12:40	5

Lab Sample ID: LCS 400-404552/2-A
Matrix: Water
Analysis Batch: 404861

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Copper	0.0500	0.0531		mg/L		106	80 - 120

Lab Sample ID: 400-156081-3 MS
Matrix: Water
Analysis Batch: 404861

Client Sample ID: GWA-1
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	<0.0021		0.0500	0.0558		mg/L		112	75 - 125

Lab Sample ID: 400-156081-3 MSD
Matrix: Water
Analysis Batch: 404861

Client Sample ID: GWA-1
Prep Type: Total Recoverable
Prep Batch: 404552

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Copper	<0.0021		0.0500	0.0556		mg/L		111	75 - 125	0	20

Chain of Custody Record



Client Information		Lab POC		Center Tracking Note:	
Client Contact: Ms. Lauren Petty Southern Company Address: PO BOX 2841 GSC8 Birmingham State Zip: AL, 35291 Phone: 205-882-5417 (Tel) Email: lpetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		Whittire, Cheyenne R E-Mail: cheyenne.whittire@testamericainc.com		COC No: Page of Job #	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347858 WO #: Project #: 40007700 SSOW#:		Analysts Requested			
Sample Identification FB-01 FERB-01 GWA-1		Sample Date 7/9/18 ↓ 17:35 16:40		Sample Time 17:15 17:35 16:40	
Sample Type G G G		Matrix W W W		Preservation Code: W W W	
Field Filtered Sample (Yes or No) N N N		Perform HPLC/MSD (Yes or No) N N N		Total Number of Containers X X X	
Special Instructions/Note: Compliance		Special Instructions/Note: Compliance			
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 Requisitioned by: Requisitioned by: <i>Lauren Petty</i> Requisitioned by: Requisitioned by:					
Date/Time: 7/9/18 18:50 Date/Time: Date/Time:		Date/Time: Date/Time: Date/Time:		Method of Shipment: Date/Time: Date/Time: Date/Time:	
Company: <i>SCS</i> Company: Company:		Company: Company: Company:		Company: Company: Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:			



Chain of Custody Record



Client Information Client Contact: Ms. Lauren Peaty Company: Southern Company Address: PO BOX 2841 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: lmpetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		Sampler: V. Nolas, L. Galar, J. Adcock Lab PIA: Whitline, Cheyenne R E-Mail: cheyenne.whitline@testamerica.com Phone: 678-467-9200		Center Tracking No: [Blank] COC No: [Blank]	
Due Date Requested: [Blank] TAT Requested (days): Standard		Analysis Requested Total Number of Containers: <input checked="" type="checkbox"/>		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - H2SO4 F - NaOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AmNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
PO #: SCS10347856 WO #: 40007700 Project #: 40007700 SSOHW:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> N Form Filled (Yes or No) <input checked="" type="checkbox"/> N Matrix (Invert, Urine, Creatinine, Urinary Acid)		Special Instructions/Notes: Compliance	
Sample Identification GWA-1A GWA-2A GWA-3A GWA-3B GWA-7 GWA-7 - filtered GWA-4 GWA-5 GWC-2 GWC-4A	Sample Date 7/10/18	Sample Time 9:40 10:15 10:23 11:57 12:15 12:35 13:25 14:27 15:55 15:55	Sample Type (C=comp, G=grab) G [Blank] [Blank] [Blank] [Blank] [Blank] [Blank] [Blank] [Blank]	Preservation Code: W [Blank] [Blank] [Blank] [Blank] [Blank] [Blank] [Blank]	QR Code: 400-158081 COC 6020-B, Ba, Be, Co, Cr, Pb, V, Zn 3440C - TDS, 300, DRGM, 280 - Chrome, Fluoride & Sulfite
Positive 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"/> Radioactive		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: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Date: 7/10/18 19:00 Date/Time: [Blank] Date/Time: [Blank]		Method of Shipment: [Blank] Date/Time: 7.11.18 Date/Time: [Blank] Date/Time: [Blank]	
Custody Seals Intact: A Yes Δ No Custody Seal No.:		Cooler Temperature: 33°C IR7 23°C IR7 23°C IR7		Company: [Blank] Company: [Blank] Company: [Blank]	



Chain of Custody Record



Client Information Client Contact: Ms. Lauren Peily Company: Southern Company Address: PO BOX 2841 GSC8 Birmingham State, Zip: AL, 35291 Phone: 205-992-5417 (Tel) Email: lmpetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		Lab PIC: Whitire, Cheyenne R E-Mail: cheyenne.whitire@testamericainc.com Sample #: 678 467 9260 Phone:		Carrier Tracking Neg#:		COC No: Page 2 of 2 Job #:					
Analysis Requested Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #: Project #: 40007700 SSON#:				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 - Heisano N - None O - ASHAD2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dinitrohydrala U - Acetona V - MCAA W - pH 4-S X - EDTA Z - other (specify)				Total Number of containers: <input checked="" type="checkbox"/>		Special Instructions/Note: Compliance	
Sample Identification Sample Date: 7/10/18 Sample Time: 16:40 Sample Type (C=copy, G=grab): G Matrix (Invert, Special, On-site, Other, etc): W Preservation Code: W Field Filtered Sample (Yes or No): N Perform MS/MSD (Yes or No): N Sulfate, Nitrate, Ammonia, Chloride, Fluoride, Boron, Barium, Cadmium, Chromium, Phosphorus, Zinc: X		Sample Date: 7/10/18 Sample Time: 16:40 Sample Type (C=copy, G=grab): G Matrix (Invert, Special, On-site, Other, etc): W Preservation Code: W Field Filtered Sample (Yes or No): N Perform MS/MSD (Yes or No): N Sulfate, Nitrate, Ammonia, Chloride, Fluoride, Boron, Barium, Cadmium, Chromium, Phosphorus, Zinc: X		Sample Date: 7/10/18 Sample Time: 16:40 Sample Type (C=copy, G=grab): G Matrix (Invert, Special, On-site, Other, etc): W Preservation Code: W Field Filtered Sample (Yes or No): N Perform MS/MSD (Yes or No): N Sulfate, Nitrate, Ammonia, Chloride, Fluoride, Boron, Barium, Cadmium, Chromium, Phosphorus, Zinc: X		Sample Date: 7/10/18 Sample Time: 16:40 Sample Type (C=copy, G=grab): G Matrix (Invert, Special, On-site, Other, etc): W Preservation Code: W Field Filtered Sample (Yes or No): N Perform MS/MSD (Yes or No): N Sulfate, Nitrate, Ammonia, Chloride, Fluoride, Boron, Barium, Cadmium, Chromium, Phosphorus, Zinc: X		Sample Date: 7/10/18 Sample Time: 16:40 Sample Type (C=copy, G=grab): G Matrix (Invert, Special, On-site, Other, etc): W Preservation Code: W Field Filtered Sample (Yes or No): N Perform MS/MSD (Yes or No): N Sulfate, Nitrate, Ammonia, Chloride, Fluoride, Boron, Barium, Cadmium, Chromium, Phosphorus, Zinc: X			
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:								Method of Shipment:			
Empty Kit Relinquished by:		Date/Time:		Company:		Date/Time:		Company:			
Relinquished by:		Date/Time:		Company:		Date/Time:		Company:			
Relinquished by:		Date/Time:		Company:		Date/Time:		Company:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature: 3.3°C Other Remarks: IR1		Date/Time:		Company:			



Chain of Custody Record



Client Information		Lab PM: Whittine, Cheyanne R		Carrier Tracking No(s):	
Client Contact: Ms. Lauren Petty		E-Mail: cheyanne.whittine@testamerica.com		COC No:	
Company: Southern Company		Phone: 850-479-9260		Page of	
Address: PO BOX 2641 GSCS		Due Date Requested:		Job #:	
City: Birmingham		TAT Requested (days):		Analysis Requested	
State, Zip: AL, 35281		Standard		400-158081 COC	
Phone: 205-992-5417(Tel)		PO #: SCS10347656		Preservation Codes:	
Email: Impetty@southernco.com		WO #:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - NaOH G - Acetic Acid H - Ascorbic Acid I - IBS J - DI Water K - EDTA L - EDA Other:	
Project Name: CCR - Plant McIntosh Ash Landfill #3		Project #: 40007700		M - Hexane N - None O - AsH2O2 P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylsulfate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Site: SSDWH:		Field Filtered Sample (Yes or No)		Total Number of containers	
Sample Identification		Perform W/MSD (Yes or No)		Special Instructions/Note:	
Sample ID		N D		Compliance	
GWC-6		X			
GWC-5		X			
GWC-1		X			
FB-02		X			
Sample Date		Sample Time		Sample Type (C-Comp, G-Grab)	
7/11/18		8:45		G	
		9:17		↓	
		9:25		↓	
		16:20		↓	
Matrix (Wet, Dry, Other)		Preservation Code:		Special Instructions/Note:	
W		W			
Possible Hazard Identification		Date		Date/Time	
<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		7/11/18		17:15	
Deliverable Requested: I, II, III, IV, Other (specify)		Date/Time:		Company: GEI	
Empty Kit Reimquished by:		Date:		Company:	
Requished by: Lauren Petty		7/11/18		Company:	
Requished by:		Date/Time:		Company:	
Requished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
				0°C	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156081-3
SDG Number: Ash Landfill #3 - Compliance

Login Number: 156081

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-7, 2.3°C, 2.3°C IR-7, 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").	True	
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: 400-156081-3
 SDG: Ash Landfill #3 - Compliance

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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* 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: 400-160308-1

TestAmerica SDG: Inactive CCR Landfill No. 3

Client Project/Site: CCR - Plant McIntosh

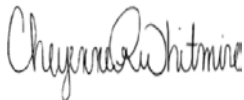
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

10/31/2018 11:31:36 AM

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	11
Sample Summary	12
Client Sample Results	13
Definitions	36
Chronicle	37
QC Association	44
QC Sample Results	50
Chain of Custody	63
Receipt Checklists	66
Certification Summary	67

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Job ID: 400-160308-1

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-160308-1**

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: GWC-5 (400-160308-17). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The method blank for analytical batch 416109 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 method blank for preparation batch 415589 and analytical batch 415796 contained Lithium 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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-160308-1

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
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0054		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.011	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00089	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-160308-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	6.9		1.0	0.89	mg/L	1		300.0	Dissolved
Barium, Dissolved	0.029		0.0025	0.00049	mg/L	5		6020	Dissolved
Calcium, Dissolved	1.3		0.25	0.13	mg/L	5		6020	Dissolved
Chromium, Dissolved	0.011		0.0025	0.0011	mg/L	5		6020	Dissolved
Cobalt, Dissolved	0.00080	J	0.0025	0.00040	mg/L	5		6020	Dissolved
Lead, Dissolved	0.00099	J	0.0013	0.00035	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.011	B	0.0050	0.0011	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.027		0.0013	0.00024	mg/L	5		6020	Dissolved
Total Dissolved Solids	92		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7A

Lab Sample ID: 400-160308-3

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	75		2.0	1.4	mg/L	2		300.0	Total/NA
Arsenic	0.00053	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0055		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0062	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0021		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2A

Lab Sample ID: 400-160308-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.040		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: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2A (Continued)

Lab Sample ID: 400-160308-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	3.7		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	0.00041	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0026		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	80		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-2B

Lab Sample ID: 400-160308-5

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	73		2.0	1.4	mg/L	2		300.0	Total/NA
Arsenic	0.00095	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.049		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0014	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	0.76		0.050	0.021	mg/L	5		6020	Total Recoverable
Cadmium	0.00071	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0051		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0091		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0049		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.000090	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	170		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3B

Lab Sample ID: 400-160308-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.9		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0067		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.068		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.024	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	1.6		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	0.0013	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: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3B (Continued)

Lab Sample ID: 400-160308-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00099	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00053	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-4

Lab Sample ID: 400-160308-7

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	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00067	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00092	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0011	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00054	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-5

Lab Sample ID: 400-160308-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16		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	17		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.044	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00037	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Selenium	0.00066	J	0.0013	0.00024	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: FB-01

Lab Sample ID: 400-160308-9

No Detections.

Client Sample ID: GWC-6

Lab Sample ID: 400-160308-10

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-6 (Continued)

Lab Sample ID: 400-160308-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.79	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0090		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-7

Lab Sample ID: 400-160308-11

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
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.91		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0026		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lead	0.00040	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0088		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0094		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWA-3A

Lab Sample ID: 400-160308-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Arsenic	0.00046	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.061		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00044	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	2.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0047		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00039	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0042	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00029	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	56		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-2

Lab Sample ID: 400-160308-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.4		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.043	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0039		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00094	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0027	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-4A

Lab Sample ID: 400-160308-14

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
Arsenic	0.00078	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.34		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00042	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-3

Lab Sample ID: 400-160308-15

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
Arsenic	0.00067	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0037		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00051	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0083		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00026	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	30		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: GWC-1

Lab Sample ID: 400-160308-16

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
Arsenic	0.00064	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-1 (Continued)

Lab Sample ID: 400-160308-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.13	J	0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0012	J	0.0050	0.0011	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-5

Lab Sample ID: 400-160308-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.098	J	0.20	0.082	mg/L	1		300.0	Total/NA
Chloride - DL	6.8		5.0	4.5	mg/L	5		300.0	Total/NA
Sulfate - DL	10		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.56		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00054	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	8.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.012		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0056		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0025		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00029	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00022		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	44		10	6.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-02

Lab Sample ID: 400-160308-18

No Detections.

Client Sample ID: FERB-01

Lab Sample ID: 400-160308-19

No Detections.

Client Sample ID: FERB-02

Lab Sample ID: 400-160308-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0011	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable

Client Sample ID: GWA-3A-FILTERED

Lab Sample ID: 400-160308-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride, Dissolved	12		1.0	0.89	mg/L	1		300.0	Dissolved
Barium, Dissolved	0.054		0.0025	0.00049	mg/L	5		6020	Dissolved
Beryllium, Dissolved	0.00036	J	0.0025	0.00034	mg/L	5		6020	Dissolved
Calcium, Dissolved	2.1		0.25	0.13	mg/L	5		6020	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A-FILTERED (Continued)

Lab Sample ID: 400-160308-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium, Dissolved	0.0023	J	0.0025	0.0011	mg/L	5		6020	Dissolved
Cobalt, Dissolved	0.0012	J	0.0025	0.00040	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.0029	J	0.0050	0.0011	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.00035	J	0.0013	0.00024	mg/L	5		6020	Dissolved
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-160308-22

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
Barium	0.036		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0036		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00049	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0085		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00027	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	52		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-160308-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.056		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.043	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0039		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00095	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0026	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	40		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: 400-160308-1
SDG: Inactive CCR Landfill No. 3

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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	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: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160308-1	GWA-1A	Water	10/08/18 13:20	10/09/18 08:54
400-160308-2	GWA-7-FILTERED	Water	10/08/18 15:10	10/09/18 08:54
400-160308-3	GWA-7A	Water	10/08/18 16:20	10/09/18 08:54
400-160308-4	GWA-2A	Water	10/08/18 13:17	10/09/18 08:54
400-160308-5	GWA-2B	Water	10/08/18 15:00	10/09/18 08:54
400-160308-6	GWA-3B	Water	10/08/18 16:15	10/09/18 08:54
400-160308-7	GWA-4	Water	10/08/18 15:50	10/09/18 08:54
400-160308-8	GWA-5	Water	10/08/18 16:55	10/09/18 08:54
400-160308-9	FB-01	Water	10/08/18 17:30	10/09/18 08:54
400-160308-10	GWC-6	Water	10/09/18 08:50	10/10/18 08:58
400-160308-11	GWA-7	Water	10/09/18 09:35	10/10/18 08:58
400-160308-12	GWA-3A	Water	10/09/18 11:25	10/10/18 08:58
400-160308-13	GWC-2	Water	10/09/18 09:00	10/10/18 08:58
400-160308-14	GWC-4A	Water	10/09/18 11:40	10/10/18 08:58
400-160308-15	GWC-3	Water	10/09/18 08:50	10/10/18 08:58
400-160308-16	GWC-1	Water	10/09/18 10:35	10/10/18 08:58
400-160308-17	GWC-5	Water	10/09/18 12:10	10/10/18 08:58
400-160308-18	FB-02	Water	10/09/18 12:20	10/10/18 08:58
400-160308-19	FERB-01	Water	10/09/18 12:25	10/10/18 08:58
400-160308-20	FERB-02	Water	10/09/18 12:40	10/10/18 08:58
400-160308-21	GWA-3A-FILTERED	Water	10/09/18 10:50	10/10/18 08:58
400-160308-22	DUP-01	Water	10/09/18 00:00	10/10/18 08:58
400-160308-23	DUP-02	Water	10/09/18 00:00	10/10/18 08:58

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-1A

Date Collected: 10/08/18 13:20

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-1

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			10/20/18 00:38	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/18 00:38	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/18 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		10/16/18 09:36	10/16/18 20:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 09:36	10/16/18 20:40	5
Barium	0.030		0.0025	0.00049	mg/L		10/16/18 09:36	10/16/18 20:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 20:40	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 09:36	10/16/18 20:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 20:40	5
Calcium	1.6		0.25	0.13	mg/L		10/16/18 09:36	10/16/18 20:40	5
Chromium	0.0054		0.0025	0.0011	mg/L		10/16/18 09:36	10/16/18 20:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 09:36	10/16/18 20:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 09:36	10/16/18 20:40	5
Lithium	0.011	B	0.0050	0.0011	mg/L		10/16/18 09:36	10/16/18 20:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 09:36	10/16/18 20:40	5
Selenium	0.00089	J	0.0013	0.00024	mg/L		10/16/18 09:36	10/16/18 20:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 09:36	10/16/18 20:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-160308-2

Date Collected: 10/08/18 15:10

Matrix: Water

Date Received: 10/09/18 08:54

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	6.9		1.0	0.89	mg/L			10/20/18 01:01	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			10/20/18 01:01	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			10/20/18 01:01	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		10/16/18 09:36	10/16/18 20:45	5
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		10/16/18 09:36	10/16/18 20:45	5
Barium, Dissolved	0.029		0.0025	0.00049	mg/L		10/16/18 09:36	10/16/18 20:45	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 20:45	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		10/16/18 09:36	10/16/18 20:45	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 20:45	5
Calcium, Dissolved	1.3		0.25	0.13	mg/L		10/16/18 09:36	10/16/18 20:45	5
Chromium, Dissolved	0.011		0.0025	0.0011	mg/L		10/16/18 09:36	10/16/18 20:45	5
Cobalt, Dissolved	0.00080	J	0.0025	0.00040	mg/L		10/16/18 09:36	10/16/18 20:45	5
Lead, Dissolved	0.00099	J	0.0013	0.00035	mg/L		10/16/18 09:36	10/16/18 20:45	5
Lithium, Dissolved	0.011	B	0.0050	0.0011	mg/L		10/16/18 09:36	10/16/18 20:45	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		10/16/18 09:36	10/16/18 20:45	5
Selenium, Dissolved	0.027		0.0013	0.00024	mg/L		10/16/18 09:36	10/16/18 20:45	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		10/16/18 09:36	10/16/18 20:45	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-7A

Date Collected: 10/08/18 16:20

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-3

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			10/19/18 09:25	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 09:25	1
Sulfate	75		2.0	1.4	mg/L			10/20/18 07:29	2

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/16/18 09:36	10/16/18 20:49	5
Arsenic	0.00053	J	0.0013	0.00046	mg/L		10/16/18 09:36	10/16/18 20:49	5
Barium	0.14		0.0025	0.00049	mg/L		10/16/18 09:36	10/16/18 20:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 20:49	5
Boron	1.3		0.050	0.021	mg/L		10/16/18 09:36	10/16/18 20:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 20:49	5
Calcium	17		0.25	0.13	mg/L		10/16/18 09:36	10/16/18 20:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 09:36	10/16/18 20:49	5
Cobalt	0.0055		0.0025	0.00040	mg/L		10/16/18 09:36	10/16/18 20:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 09:36	10/16/18 20:49	5
Lithium	0.0062	B	0.0050	0.0011	mg/L		10/16/18 09:36	10/16/18 20:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 09:36	10/16/18 20:49	5
Selenium	0.0021		0.0013	0.00024	mg/L		10/16/18 09:36	10/16/18 20:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 09:36	10/16/18 20:49	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2A

Date Collected: 10/08/18 13:17

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			10/19/18 10:44	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 10:44	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 12:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 12:40	5
Barium	0.040		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 12:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 12:40	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 12:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 12:40	5
Calcium	3.7		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 12:40	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 12:40	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 12:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 12:40	5
Lithium	0.011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 12:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 12:40	5
Selenium	0.0026		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 12:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 12:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	80		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2B

Date Collected: 10/08/18 15:00

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-5

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			10/19/18 11:06	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 11:06	1
Sulfate	73		2.0	1.4	mg/L			10/20/18 07:52	2

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/16/18 18:55	10/17/18 13:02	5
Arsenic	0.00095	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:02	5
Barium	0.049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:02	5
Beryllium	0.0014	J	0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:02	5
Boron	0.76		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:02	5
Cadmium	0.00071	J	0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:02	5
Calcium	17		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:02	5
Cobalt	0.0051		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:02	5
Lithium	0.0091		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:02	5
Selenium	0.0049		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:02	5
Thallium	0.000090	J	0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:02	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		10/23/18 16:33	10/25/18 10:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3B

Date Collected: 10/08/18 16:15

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		1.0	0.89	mg/L			10/19/18 11:32	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 11:32	1
Sulfate	1.9		1.0	0.70	mg/L			10/19/18 11:32	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		10/16/18 18:55	10/17/18 13:06	5
Arsenic	0.0067		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:06	5
Barium	0.068		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:06	5
Boron	0.024	J	0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:06	5
Calcium	1.6		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:06	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:06	5
Cobalt	0.0013	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:06	5
Lead	0.00099	J	0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:06	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:06	5
Selenium	0.00053	J	0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-4

Date Collected: 10/08/18 15:50

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-7

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			10/19/18 11:56	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 11:56	1
Sulfate	3.4		1.0	0.70	mg/L			10/19/18 11:56	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		10/16/18 18:55	10/17/18 13:11	5
Arsenic	0.00067	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:11	5
Barium	0.042		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:11	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:11	5
Calcium	1.1		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:11	5
Cobalt	0.00092	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:11	5
Lithium	0.0011	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:11	5
Selenium	0.00054	J	0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:11	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		10/23/18 16:33	10/25/18 10:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-5

Date Collected: 10/08/18 16:55

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		1.0	0.89	mg/L			10/19/18 12:19	1
Fluoride	0.11	J	0.20	0.082	mg/L			10/19/18 12:19	1
Sulfate	17		1.0	0.70	mg/L			10/19/18 12:19	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		10/16/18 18:55	10/17/18 13:33	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:33	5
Barium	0.11		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:33	5
Boron	0.044	J	0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:33	5
Calcium	3.2		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:33	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:33	5
Cobalt	0.0013	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:33	5
Lead	0.00037	J	0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:33	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:33	5
Selenium	0.00066	J	0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:33	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		10/23/18 16:33	10/25/18 10:35	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			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: FB-01
Date Collected: 10/08/18 17:30
Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-9
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/19/18 21:58	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 21:58	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 13:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:38	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:38	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:38	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:38	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 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			10/12/18 16:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-6

Date Collected: 10/09/18 08:50

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.6		1.0	0.89	mg/L			10/19/18 22:21	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 22:21	1
Sulfate	0.79	J	1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 13:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:42	5
Barium	0.041		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:42	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:42	5
Calcium	1.5		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:42	5
Cobalt	0.00052	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:42	5
Lithium	0.0090		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 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		10/23/18 16:33	10/25/18 10:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-7

Date Collected: 10/09/18 09:35

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-11

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			10/19/18 23:29	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 23:29	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 13:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:47	5
Barium	0.014		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:47	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:47	5
Calcium	0.91		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:47	5
Chromium	0.0026		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:47	5
Lead	0.00040	J	0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:47	5
Lithium	0.0088		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:47	5
Selenium	0.0094		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72		5.0	3.4	mg/L			10/15/18 16:53	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A

Date Collected: 10/09/18 11:25

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-12

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			10/19/18 23:52	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 23:52	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 13:51	5
Arsenic	0.00046	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:51	5
Barium	0.061		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:51	5
Beryllium	0.00044	J	0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:51	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:51	5
Calcium	2.2		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:51	5
Chromium	0.0047		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:51	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:51	5
Lead	0.00039	J	0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:51	5
Lithium	0.0042	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:51	5
Selenium	0.00029	J	0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 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		10/23/18 16:33	10/25/18 10:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-2
Date Collected: 10/09/18 09:00
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-13
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.4		1.0	0.89	mg/L			10/19/18 12:44	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 12:44	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 12:44	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		10/16/18 18:55	10/17/18 13:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 13:56	5
Barium	0.057		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 13:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:56	5
Boron	0.043	J	0.050	0.021	mg/L		10/16/18 18:55	10/17/18 13:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 13:56	5
Calcium	1.7		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 13:56	5
Chromium	0.0039		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 13:56	5
Cobalt	0.00094	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 13:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 13:56	5
Lithium	0.0027	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 13:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 13:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 13:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 13:56	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		10/23/18 16:33	10/25/18 10:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-4A

Date Collected: 10/09/18 11:40

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-14

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			10/20/18 00:15	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/18 00:15	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/18 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		10/16/18 18:55	10/17/18 14:00	5
Arsenic	0.00078	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:00	5
Barium	0.029		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:00	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:00	5
Calcium	0.34		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:00	5
Cobalt	0.00042	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:00	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:00	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 10:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			10/15/18 16:53	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-3

Date Collected: 10/09/18 08:50

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-15

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			10/19/18 02:23	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 02:23	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 02:23	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		10/16/18 18:55	10/17/18 14:05	5
Arsenic	0.00067	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:05	5
Barium	0.036		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:05	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:05	5
Calcium	2.0		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:05	5
Chromium	0.0037		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:05	5
Cobalt	0.00051	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:05	5
Lithium	0.0083		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:05	5
Selenium	0.00026	J	0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:05	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		10/23/18 16:33	10/25/18 10:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	30		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-1
Date Collected: 10/09/18 10:35
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-16
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			10/19/18 06:34	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 06:34	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 06:34	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		10/16/18 18:55	10/17/18 14:09	5
Arsenic	0.00064	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:09	5
Barium	0.015		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:09	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:09	5
Calcium	0.13	J	0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:09	5
Lithium	0.0012	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 11:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-5

Date Collected: 10/09/18 12:10

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-17

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.098	J	0.20	0.082	mg/L			10/20/18 07:06	1

Method: 300.0 - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.8		5.0	4.5	mg/L			10/19/18 08:32	5
Sulfate	10		5.0	3.5	mg/L			10/19/18 08:32	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/16/18 18:55	10/17/18 14:14	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:14	5
Barium	0.56		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:14	5
Beryllium	0.00054	J	0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:14	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:14	5
Calcium	8.0		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:14	5
Cobalt	0.012		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:14	5
Lithium	0.0056		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:14	5
Selenium	0.0025		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:14	5
Thallium	0.00029	J	0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:14	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00022		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 11:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		10	6.8	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: FB-02
Date Collected: 10/09/18 12:20
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-18
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			10/19/18 06:56	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 06:56	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 14:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:36	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:36	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:36	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 11:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: FERB-01

Date Collected: 10/09/18 12:25

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-19

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			10/19/18 07:19	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 07:19	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 07:19	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/16/18 18:55	10/17/18 14:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:41	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:41	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:41	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:41	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:41	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 11:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: FERB-02

Date Collected: 10/09/18 12:40

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-20

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/19/18 08:59	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 08:59	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 08:59	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		10/16/18 18:55	10/17/18 14:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:46	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:46	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:46	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:46	5
Lithium	0.0011	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:46	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		10/23/18 16:33	10/25/18 11:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A-FILTERED

Lab Sample ID: 400-160308-21

Date Collected: 10/09/18 10:50

Matrix: Water

Date Received: 10/10/18 08:58

Method: 300.0 - Anions, Ion Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	12		1.0	0.89	mg/L			10/19/18 07:42	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			10/19/18 07:42	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			10/19/18 07:42	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		10/16/18 18:55	10/17/18 14:50	5
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:50	5
Barium, Dissolved	0.054		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:50	5
Beryllium, Dissolved	0.00036	J	0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:50	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:50	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:50	5
Calcium, Dissolved	2.1		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:50	5
Chromium, Dissolved	0.0023	J	0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:50	5
Cobalt, Dissolved	0.0012	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:50	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:50	5
Lithium, Dissolved	0.0029	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:50	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:50	5
Selenium, Dissolved	0.00035	J	0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:50	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:50	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		10/19/18 10:52	10/23/18 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: DUP-01
Date Collected: 10/09/18 00:00
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-22
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			10/19/18 19:18	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 19:18	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 14:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:55	5
Barium	0.036		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:55	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:55	5
Calcium	2.0		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:55	5
Chromium	0.0036		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:55	5
Cobalt	0.00049 J		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:55	5
Lithium	0.0085		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:55	5
Selenium	0.00027 J		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 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		10/19/18 10:52	10/23/18 10:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	52		5.0	3.4	mg/L			10/13/18 10:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: DUP-02
Date Collected: 10/09/18 00:00
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-23
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		1.0	0.89	mg/L			10/19/18 20:49	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 20:49	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 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		10/16/18 18:55	10/17/18 14:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 14:59	5
Barium	0.056		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 14:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:59	5
Boron	0.043	J	0.050	0.021	mg/L		10/16/18 18:55	10/17/18 14:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 14:59	5
Calcium	1.7		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 14:59	5
Chromium	0.0039		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 14:59	5
Cobalt	0.00095	J	0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 14:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 14:59	5
Lithium	0.0026	J	0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 14:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 14:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 14:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 14:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/19/18 10:52	10/23/18 10:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			10/13/18 10:40	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

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
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-1A

Date Collected: 10/08/18 13:20

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/20/18 00:38	BAW	TAL PEN
Total Recoverable	Prep	3005A			415589	10/16/18 09:36	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415796	10/16/18 20:40	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWA-7-FILTERED

Date Collected: 10/08/18 15:10

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	417764	10/20/18 01:01	TAJ	TAL PEN
Dissolved	Prep	3005A			415589	10/16/18 09:36	DRE	TAL PEN
Dissolved	Analysis	6020		5	415796	10/16/18 20:45	DRE	TAL PEN
Dissolved	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Dissolved	Analysis	7470A		1	416999	10/25/18 10:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWA-7A

Date Collected: 10/08/18 16:20

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 09:25	BAW	TAL PEN
Total/NA	Analysis	300.0		2	416247	10/20/18 07:29	BAW	TAL PEN
Total Recoverable	Prep	3005A			415589	10/16/18 09:36	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415796	10/16/18 20:49	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWA-2A

Date Collected: 10/08/18 13:17

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 10:44	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 12:40	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:13	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2A

Date Collected: 10/08/18 13:17

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWA-2B

Date Collected: 10/08/18 15:00

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 11:06	BAW	TAL PEN
Total/NA	Analysis	300.0		2	416247	10/20/18 07:52	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:02	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWA-3B

Date Collected: 10/08/18 16:15

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 11:32	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:06	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWA-4

Date Collected: 10/08/18 15:50

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 11:56	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:11	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-5

Date Collected: 10/08/18 16:55

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 12:19	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:33	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: FB-01

Date Collected: 10/08/18 17:30

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/19/18 21:58	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:38	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415223	10/12/18 16:28	CLB	TAL PEN

Client Sample ID: GWC-6

Date Collected: 10/09/18 08:50

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/19/18 22:21	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:42	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: GWA-7

Date Collected: 10/09/18 09:35

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/19/18 23:29	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:47	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415521	10/15/18 16:53	CLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A

Lab Sample ID: 400-160308-12

Date Collected: 10/09/18 11:25

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/19/18 23:52	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:51	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: GWC-2

Lab Sample ID: 400-160308-13

Date Collected: 10/09/18 09:00

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 12:44	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 13:56	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: GWC-4A

Lab Sample ID: 400-160308-14

Date Collected: 10/09/18 11:40

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/20/18 00:15	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:00	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415521	10/15/18 16:53	CLB	TAL PEN

Client Sample ID: GWC-3

Lab Sample ID: 400-160308-15

Date Collected: 10/09/18 08:50

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 02:23	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:05	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 10:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-1

Date Collected: 10/09/18 10:35

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 06:34	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:09	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 11:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: GWC-5

Date Collected: 10/09/18 12:10

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0	DL	5	416109	10/19/18 08:32	BAW	TAL PEN
Total/NA	Analysis	300.0		1	416247	10/20/18 07:06	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:14	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 11:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: FB-02

Date Collected: 10/09/18 12:20

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 06:56	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:36	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 11:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: FERB-01

Date Collected: 10/09/18 12:25

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 07:19	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:41	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 11:13	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: FERB-01

Lab Sample ID: 400-160308-19

Date Collected: 10/09/18 12:25

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: FERB-02

Lab Sample ID: 400-160308-20

Date Collected: 10/09/18 12:40

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416109	10/19/18 08:59	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:46	DRE	TAL PEN
Total/NA	Prep	7470A			416643	10/23/18 16:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416999	10/25/18 11:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: GWA-3A-FILTERED

Lab Sample ID: 400-160308-21

Date Collected: 10/09/18 10:50

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	300.0		1	417756	10/19/18 07:42	TAJ	TAL PEN
Dissolved	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Dissolved	Analysis	6020		5	415935	10/17/18 14:50	DRE	TAL PEN
Dissolved	Prep	7470A			416091	10/19/18 10:52	JAP	TAL PEN
Dissolved	Analysis	7470A		1	416630	10/23/18 10:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Client Sample ID: DUP-01

Lab Sample ID: 400-160308-22

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/19/18 19:18	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:55	DRE	TAL PEN
Total/NA	Prep	7470A			416091	10/19/18 10:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416630	10/23/18 10:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Client Sample ID: DUP-02

Date Collected: 10/09/18 00:00

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	416164	10/19/18 20:49	BAW	TAL PEN
Total Recoverable	Prep	3005A			415706	10/16/18 18:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415935	10/17/18 14:59	DRE	TAL PEN
Total/NA	Prep	7470A			416091	10/19/18 10:52	JAP	TAL PEN
Total/NA	Analysis	7470A		1	416630	10/23/18 10:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	415289	10/13/18 10:40	CLB	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: 400-160308-1
SDG: Inactive CCR Landfill No. 3

HPLC/IC

Analysis Batch: 416109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-3	GWA-7A	Total/NA	Water	300.0	
400-160308-4	GWA-2A	Total/NA	Water	300.0	
400-160308-5	GWA-2B	Total/NA	Water	300.0	
400-160308-6	GWA-3B	Total/NA	Water	300.0	
400-160308-7	GWA-4	Total/NA	Water	300.0	
400-160308-8	GWA-5	Total/NA	Water	300.0	
400-160308-13	GWC-2	Total/NA	Water	300.0	
400-160308-15	GWC-3	Total/NA	Water	300.0	
400-160308-16	GWC-1	Total/NA	Water	300.0	
400-160308-17 - DL	GWC-5	Total/NA	Water	300.0	
400-160308-18	FB-02	Total/NA	Water	300.0	
400-160308-19	FERB-01	Total/NA	Water	300.0	
400-160308-20	FERB-02	Total/NA	Water	300.0	
MB 400-416109/4	Method Blank	Total/NA	Water	300.0	
LCS 400-416109/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-416109/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-160308-15 MS	GWC-3	Total/NA	Water	300.0	
400-160308-15 MSD	GWC-3	Total/NA	Water	300.0	

Analysis Batch: 416164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total/NA	Water	300.0	
400-160308-9	FB-01	Total/NA	Water	300.0	
400-160308-10	GWC-6	Total/NA	Water	300.0	
400-160308-11	GWA-7	Total/NA	Water	300.0	
400-160308-12	GWA-3A	Total/NA	Water	300.0	
400-160308-14	GWC-4A	Total/NA	Water	300.0	
400-160308-22	DUP-01	Total/NA	Water	300.0	
400-160308-23	DUP-02	Total/NA	Water	300.0	
MB 400-416164/36	Method Blank	Total/NA	Water	300.0	
LCS 400-416164/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-416164/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-160308-22 MS	DUP-01	Total/NA	Water	300.0	
400-160308-22 MSD	DUP-01	Total/NA	Water	300.0	

Analysis Batch: 416247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-3	GWA-7A	Total/NA	Water	300.0	
400-160308-5	GWA-2B	Total/NA	Water	300.0	
400-160308-17	GWC-5	Total/NA	Water	300.0	
MB 400-416247/4	Method Blank	Total/NA	Water	300.0	
LCS 400-416247/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-416247/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-160734-I-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-160734-I-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 417756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	300.0	
MB 400-417756/4	Method Blank	Total/NA	Water	300.0	
LCS 400-417756/5	Lab Control Sample	Total/NA	Water	300.0	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

HPLC/IC (Continued)

Analysis Batch: 417756 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-417756/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-160308-15 MS	GWC-3	Total/NA	Water	300.0	
400-160308-15 MSD	GWC-3	Total/NA	Water	300.0	

Analysis Batch: 417764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-2	GWA-7-FILTERED	Dissolved	Water	300.0	
MB 400-417764/36	Method Blank	Total/NA	Water	300.0	
LCS 400-417764/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-417764/38	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 415589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total Recoverable	Water	3005A	
400-160308-2	GWA-7-FILTERED	Dissolved	Water	3005A	
400-160308-3	GWA-7A	Total Recoverable	Water	3005A	
MB 400-415589/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-415589/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-159905-E-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-159905-E-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 415706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-4	GWA-2A	Total Recoverable	Water	3005A	
400-160308-5	GWA-2B	Total Recoverable	Water	3005A	
400-160308-6	GWA-3B	Total Recoverable	Water	3005A	
400-160308-7	GWA-4	Total Recoverable	Water	3005A	
400-160308-8	GWA-5	Total Recoverable	Water	3005A	
400-160308-9	FB-01	Total Recoverable	Water	3005A	
400-160308-10	GWC-6	Total Recoverable	Water	3005A	
400-160308-11	GWA-7	Total Recoverable	Water	3005A	
400-160308-12	GWA-3A	Total Recoverable	Water	3005A	
400-160308-13	GWC-2	Total Recoverable	Water	3005A	
400-160308-14	GWC-4A	Total Recoverable	Water	3005A	
400-160308-15	GWC-3	Total Recoverable	Water	3005A	
400-160308-16	GWC-1	Total Recoverable	Water	3005A	
400-160308-17	GWC-5	Total Recoverable	Water	3005A	
400-160308-18	FB-02	Total Recoverable	Water	3005A	
400-160308-19	FERB-01	Total Recoverable	Water	3005A	
400-160308-20	FERB-02	Total Recoverable	Water	3005A	
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	3005A	
400-160308-22	DUP-01	Total Recoverable	Water	3005A	
400-160308-23	DUP-02	Total Recoverable	Water	3005A	
MB 400-415706/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-415706/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-160308-4 MS	GWA-2A	Total Recoverable	Water	3005A	
400-160308-4 MSD	GWA-2A	Total Recoverable	Water	3005A	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Metals (Continued)

Analysis Batch: 415796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total Recoverable	Water	6020	415589
400-160308-2	GWA-7-FILTERED	Dissolved	Water	6020	415589
400-160308-3	GWA-7A	Total Recoverable	Water	6020	415589
MB 400-415589/1-A ^5	Method Blank	Total Recoverable	Water	6020	415589
LCS 400-415589/2-A	Lab Control Sample	Total Recoverable	Water	6020	415589
400-159905-E-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	415589
400-159905-E-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	415589

Analysis Batch: 415935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-4	GWA-2A	Total Recoverable	Water	6020	415706
400-160308-5	GWA-2B	Total Recoverable	Water	6020	415706
400-160308-6	GWA-3B	Total Recoverable	Water	6020	415706
400-160308-7	GWA-4	Total Recoverable	Water	6020	415706
400-160308-8	GWA-5	Total Recoverable	Water	6020	415706
400-160308-9	FB-01	Total Recoverable	Water	6020	415706
400-160308-10	GWC-6	Total Recoverable	Water	6020	415706
400-160308-11	GWA-7	Total Recoverable	Water	6020	415706
400-160308-12	GWA-3A	Total Recoverable	Water	6020	415706
400-160308-13	GWC-2	Total Recoverable	Water	6020	415706
400-160308-14	GWC-4A	Total Recoverable	Water	6020	415706
400-160308-15	GWC-3	Total Recoverable	Water	6020	415706
400-160308-16	GWC-1	Total Recoverable	Water	6020	415706
400-160308-17	GWC-5	Total Recoverable	Water	6020	415706
400-160308-18	FB-02	Total Recoverable	Water	6020	415706
400-160308-19	FERB-01	Total Recoverable	Water	6020	415706
400-160308-20	FERB-02	Total Recoverable	Water	6020	415706
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	6020	415706
400-160308-22	DUP-01	Total Recoverable	Water	6020	415706
400-160308-23	DUP-02	Total Recoverable	Water	6020	415706
MB 400-415706/1-A ^5	Method Blank	Total Recoverable	Water	6020	415706
LCS 400-415706/2-A	Lab Control Sample	Total Recoverable	Water	6020	415706
400-160308-4 MS	GWA-2A	Total Recoverable	Water	6020	415706
400-160308-4 MSD	GWA-2A	Total Recoverable	Water	6020	415706

Prep Batch: 416091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	7470A	
400-160308-22	DUP-01	Total/NA	Water	7470A	
400-160308-23	DUP-02	Total/NA	Water	7470A	
MB 400-416091/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-416091/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-160526-H-3-C MS	Matrix Spike	Total/NA	Water	7470A	
400-160526-H-3-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 416630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	7470A	416091
400-160308-22	DUP-01	Total/NA	Water	7470A	416091
400-160308-23	DUP-02	Total/NA	Water	7470A	416091
MB 400-416091/13-A	Method Blank	Total/NA	Water	7470A	416091

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

Metals (Continued)

Analysis Batch: 416630 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-416091/14-A	Lab Control Sample	Total/NA	Water	7470A	416091
400-160526-H-3-C MS	Matrix Spike	Total/NA	Water	7470A	416091
400-160526-H-3-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	416091

Prep Batch: 416643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total/NA	Water	7470A	
400-160308-2	GWA-7-FILTERED	Dissolved	Water	7470A	
400-160308-3	GWA-7A	Total/NA	Water	7470A	
400-160308-4	GWA-2A	Total/NA	Water	7470A	
400-160308-5	GWA-2B	Total/NA	Water	7470A	
400-160308-6	GWA-3B	Total/NA	Water	7470A	
400-160308-7	GWA-4	Total/NA	Water	7470A	
400-160308-8	GWA-5	Total/NA	Water	7470A	
400-160308-9	FB-01	Total/NA	Water	7470A	
400-160308-10	GWC-6	Total/NA	Water	7470A	
400-160308-11	GWA-7	Total/NA	Water	7470A	
400-160308-12	GWA-3A	Total/NA	Water	7470A	
400-160308-13	GWC-2	Total/NA	Water	7470A	
400-160308-14	GWC-4A	Total/NA	Water	7470A	
400-160308-15	GWC-3	Total/NA	Water	7470A	
400-160308-16	GWC-1	Total/NA	Water	7470A	
400-160308-17	GWC-5	Total/NA	Water	7470A	
400-160308-18	FB-02	Total/NA	Water	7470A	
400-160308-19	FERB-01	Total/NA	Water	7470A	
400-160308-20	FERB-02	Total/NA	Water	7470A	
MB 400-416643/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-416643/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-160308-1 MS	GWA-1A	Total/NA	Water	7470A	
400-160308-1 MSD	GWA-1A	Total/NA	Water	7470A	

Analysis Batch: 416999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total/NA	Water	7470A	416643
400-160308-2	GWA-7-FILTERED	Dissolved	Water	7470A	416643
400-160308-3	GWA-7A	Total/NA	Water	7470A	416643
400-160308-4	GWA-2A	Total/NA	Water	7470A	416643
400-160308-5	GWA-2B	Total/NA	Water	7470A	416643
400-160308-6	GWA-3B	Total/NA	Water	7470A	416643
400-160308-7	GWA-4	Total/NA	Water	7470A	416643
400-160308-8	GWA-5	Total/NA	Water	7470A	416643
400-160308-9	FB-01	Total/NA	Water	7470A	416643
400-160308-10	GWC-6	Total/NA	Water	7470A	416643
400-160308-11	GWA-7	Total/NA	Water	7470A	416643
400-160308-12	GWA-3A	Total/NA	Water	7470A	416643
400-160308-13	GWC-2	Total/NA	Water	7470A	416643
400-160308-14	GWC-4A	Total/NA	Water	7470A	416643
400-160308-15	GWC-3	Total/NA	Water	7470A	416643
400-160308-16	GWC-1	Total/NA	Water	7470A	416643
400-160308-17	GWC-5	Total/NA	Water	7470A	416643
400-160308-18	FB-02	Total/NA	Water	7470A	416643

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

Metals (Continued)

Analysis Batch: 416999 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-19	FERB-01	Total/NA	Water	7470A	416643
400-160308-20	FERB-02	Total/NA	Water	7470A	416643
MB 400-416643/14-A	Method Blank	Total/NA	Water	7470A	416643
LCS 400-416643/15-A	Lab Control Sample	Total/NA	Water	7470A	416643
400-160308-1 MS	GWA-1A	Total/NA	Water	7470A	416643
400-160308-1 MSD	GWA-1A	Total/NA	Water	7470A	416643

General Chemistry

Analysis Batch: 415223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total/NA	Water	SM 2540C	
400-160308-2	GWA-7-FILTERED	Total/NA	Water	SM 2540C	
400-160308-3	GWA-7A	Total/NA	Water	SM 2540C	
400-160308-4	GWA-2A	Total/NA	Water	SM 2540C	
400-160308-5	GWA-2B	Total/NA	Water	SM 2540C	
400-160308-6	GWA-3B	Total/NA	Water	SM 2540C	
400-160308-7	GWA-4	Total/NA	Water	SM 2540C	
400-160308-8	GWA-5	Total/NA	Water	SM 2540C	
400-160308-9	FB-01	Total/NA	Water	SM 2540C	
MB 400-415223/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-415223/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160308-6 DU	GWA-3B	Total/NA	Water	SM 2540C	

Analysis Batch: 415289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-10	GWC-6	Total/NA	Water	SM 2540C	
400-160308-12	GWA-3A	Total/NA	Water	SM 2540C	
400-160308-13	GWC-2	Total/NA	Water	SM 2540C	
400-160308-15	GWC-3	Total/NA	Water	SM 2540C	
400-160308-16	GWC-1	Total/NA	Water	SM 2540C	
400-160308-17	GWC-5	Total/NA	Water	SM 2540C	
400-160308-18	FB-02	Total/NA	Water	SM 2540C	
400-160308-19	FERB-01	Total/NA	Water	SM 2540C	
400-160308-20	FERB-02	Total/NA	Water	SM 2540C	
400-160308-21	GWA-3A-FILTERED	Total/NA	Water	SM 2540C	
400-160308-22	DUP-01	Total/NA	Water	SM 2540C	
400-160308-23	DUP-02	Total/NA	Water	SM 2540C	
MB 400-415289/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-415289/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160329-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	
400-160342-B-10 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 415521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-11	GWA-7	Total/NA	Water	SM 2540C	
400-160308-14	GWC-4A	Total/NA	Water	SM 2540C	
MB 400-415521/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-415521/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-160351-D-1 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

General Chemistry (Continued)

Analysis Batch: 415521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160351-D-2 DU	Duplicate	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-416109/4
Matrix: Water
Analysis Batch: 416109

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			10/19/18 01:14	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 01:14	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 01:14	1

Lab Sample ID: LCS 400-416109/5
Matrix: Water
Analysis Batch: 416109

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	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-416109/6
Matrix: Water
Analysis Batch: 416109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.86		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.8		mg/L		108	90 - 110	1	15
Sulfate	10.0	10.6		mg/L		106	90 - 110	2	15

Lab Sample ID: 400-160308-15 MS
Matrix: Water
Analysis Batch: 416109

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10		10.0	19.9		mg/L		98	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: 400-160308-15 MSD
Matrix: Water
Analysis Batch: 416109

Client Sample ID: GWC-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	10		10.0	20.0		mg/L		99	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: MB 400-416164/36
Matrix: Water
Analysis Batch: 416164

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			10/19/18 14:02	1
Fluoride	<0.082		0.20	0.082	mg/L			10/19/18 14:02	1
Sulfate	<0.70		1.0	0.70	mg/L			10/19/18 14:02	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-416164/37
Matrix: Water
Analysis Batch: 416164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.95		mg/L		99	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

Lab Sample ID: LCSD 400-416164/38
Matrix: Water
Analysis Batch: 416164

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.93		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	1	15
Sulfate	10.0	10.6		mg/L		106	90 - 110	1	15

Lab Sample ID: 400-160308-22 MS
Matrix: Water
Analysis Batch: 416164

Client Sample ID: DUP-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10		10.0	20.0		mg/L		98	80 - 120
Chloride, Dissolved	10		10.0	20.0		mg/L		98	80 - 120
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120
Fluoride, Dissolved	<0.082		10.0	10.9		mg/L		109	80 - 120
Sulfate	<0.70		10.0	11.0		mg/L		110	80 - 120
Sulfate, Dissolved	<0.70		10.0	11.0		mg/L		110	80 - 120

Lab Sample ID: 400-160308-22 MSD
Matrix: Water
Analysis Batch: 416164

Client Sample ID: DUP-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10		10.0	20.1		mg/L		99	80 - 120	0	20
Chloride, Dissolved	10		10.0	20.1		mg/L		99	80 - 120	0	20
Fluoride	<0.082		10.0	11.0		mg/L		110	80 - 120	1	20
Fluoride, Dissolved	<0.082		10.0	11.0		mg/L		110	80 - 120	1	20
Sulfate	<0.70		10.0	11.1		mg/L		111	80 - 120	1	20
Sulfate, Dissolved	<0.70		10.0	11.1		mg/L		111	80 - 120	1	20

Lab Sample ID: MB 400-416247/4
Matrix: Water
Analysis Batch: 416247

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/20/18 02:09	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/18 02:09	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/18 02:09	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-416247/5
Matrix: Water
Analysis Batch: 416247

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	9.89		mg/L		99	90 - 110
Fluoride	10.0	10.7		mg/L		107	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-416247/6
Matrix: Water
Analysis Batch: 416247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.88		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.7		mg/L		107	90 - 110	1	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	0	15

Lab Sample ID: 400-160734-I-4 MS
Matrix: Water
Analysis Batch: 416247

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	6.7		10.0	16.5		mg/L		98	80 - 120
Fluoride	0.18	J	10.0	10.5		mg/L		103	80 - 120
Sulfate	13		10.0	23.5		mg/L		105	80 - 120

Lab Sample ID: 400-160734-I-4 MSD
Matrix: Water
Analysis Batch: 416247

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.7		10.0	16.7		mg/L		100	80 - 120	1	20
Fluoride	0.18	J	10.0	10.7		mg/L		106	80 - 120	2	20
Sulfate	13		10.0	23.9		mg/L		109	80 - 120	1	20

Lab Sample ID: MB 400-417756/4
Matrix: Water
Analysis Batch: 417756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	<0.89		1.0	0.89	mg/L			10/19/18 01:14	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			10/19/18 01:14	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			10/19/18 01:14	1

Lab Sample ID: LCS 400-417756/5
Matrix: Water
Analysis Batch: 417756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride, Dissolved	10.0	9.87		mg/L		99	90 - 110
Fluoride, Dissolved	10.0	10.9		mg/L		109	90 - 110
Sulfate, Dissolved	10.0	10.3		mg/L		103	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-417756/6

Matrix: Water

Analysis Batch: 417756

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, Dissolved	10.0	9.86		mg/L		99	90 - 110	0	15
Fluoride, Dissolved	10.0	10.8		mg/L		108	90 - 110	1	15
Sulfate, Dissolved	10.0	10.6		mg/L		106	90 - 110	2	15

Lab Sample ID: 400-160308-15 MS

Matrix: Water

Analysis Batch: 417756

Client Sample ID: GWC-3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10		10.0	19.9		mg/L		98	80 - 120
Chloride, Dissolved	10		10.0	19.9		mg/L		98	80 - 120
Fluoride	<0.082		10.0	10.8		mg/L		108	80 - 120
Fluoride, Dissolved	<0.082		10.0	10.8		mg/L		108	80 - 120
Sulfate	<0.70		10.0	10.9		mg/L		109	80 - 120
Sulfate, Dissolved	<0.70		10.0	10.9		mg/L		109	80 - 120

Lab Sample ID: 400-160308-15 MSD

Matrix: Water

Analysis Batch: 417756

Client Sample ID: GWC-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	10		10.0	20.0		mg/L		99	80 - 120	0	20
Chloride, Dissolved	10		10.0	20.0		mg/L		99	80 - 120	0	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	1	20
Fluoride, Dissolved	<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
Sulfate, Dissolved	<0.70		10.0	11.0		mg/L		110	80 - 120	1	20

Lab Sample ID: MB 400-417764/36

Matrix: Water

Analysis Batch: 417764

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride, Dissolved	<0.89		1.0	0.89	mg/L			10/19/18 14:02	1
Fluoride, Dissolved	<0.082		0.20	0.082	mg/L			10/19/18 14:02	1
Sulfate, Dissolved	<0.70		1.0	0.70	mg/L			10/19/18 14:02	1

Lab Sample ID: LCS 400-417764/37

Matrix: Water

Analysis Batch: 417764

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride, Dissolved	10.0	9.95		mg/L		99	90 - 110
Fluoride, Dissolved	10.0	10.6		mg/L		106	90 - 110
Sulfate, Dissolved	10.0	10.7		mg/L		107	90 - 110

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-417764/38
Matrix: Water
Analysis Batch: 417764

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, Dissolved	10.0	9.93		mg/L		99	90 - 110	0	15
Fluoride, Dissolved	10.0	10.6		mg/L		106	90 - 110	1	15
Sulfate, Dissolved	10.0	10.6		mg/L		106	90 - 110	1	15

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-415589/1-A ^5
Matrix: Water
Analysis Batch: 415796

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 415589

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/16/18 09:36	10/16/18 18:17	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		10/16/18 09:36	10/16/18 18:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 09:36	10/16/18 18:17	5
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		10/16/18 09:36	10/16/18 18:17	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/16/18 09:36	10/16/18 18:17	5
Barium, Dissolved	<0.00049		0.0025	0.00049	mg/L		10/16/18 09:36	10/16/18 18:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 18:17	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 18:17	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 09:36	10/16/18 18:17	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		10/16/18 09:36	10/16/18 18:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 18:17	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 09:36	10/16/18 18:17	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/18 09:36	10/16/18 18:17	5
Calcium, Dissolved	<0.13		0.25	0.13	mg/L		10/16/18 09:36	10/16/18 18:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 09:36	10/16/18 18:17	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		10/16/18 09:36	10/16/18 18:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 09:36	10/16/18 18:17	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		10/16/18 09:36	10/16/18 18:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 09:36	10/16/18 18:17	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		10/16/18 09:36	10/16/18 18:17	5
Lithium	0.00141	J	0.0050	0.0011	mg/L		10/16/18 09:36	10/16/18 18:17	5
Lithium, Dissolved	0.00141	J	0.0050	0.0011	mg/L		10/16/18 09:36	10/16/18 18:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 09:36	10/16/18 18:17	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		10/16/18 09:36	10/16/18 18:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 09:36	10/16/18 18:17	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		10/16/18 09:36	10/16/18 18:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 09:36	10/16/18 18:17	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		10/16/18 09:36	10/16/18 18:17	5

Lab Sample ID: LCS 400-415589/2-A
Matrix: Water
Analysis Batch: 415796

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0507		mg/L		101	80 - 120
Antimony, Dissolved	0.0500	0.0507		mg/L		101	80 - 120
Arsenic	0.0500	0.0499		mg/L		100	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-415589/2-A
Matrix: Water
Analysis Batch: 415796

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic, Dissolved	0.0500	0.0499		mg/L		100	80 - 120
Barium	0.0500	0.0512		mg/L		102	80 - 120
Barium, Dissolved	0.0500	0.0512		mg/L		102	80 - 120
Beryllium	0.0500	0.0502		mg/L		100	80 - 120
Beryllium, Dissolved	0.0500	0.0502		mg/L		100	80 - 120
Boron	0.100	0.0920		mg/L		92	80 - 120
Boron, Dissolved	0.100	0.0920		mg/L		92	80 - 120
Cadmium	0.0500	0.0503		mg/L		101	80 - 120
Cadmium, Dissolved	0.0500	0.0503		mg/L		101	80 - 120
Calcium	5.00	5.03		mg/L		101	80 - 120
Calcium, Dissolved	5.00	5.03		mg/L		101	80 - 120
Chromium	0.0500	0.0529		mg/L		106	80 - 120
Chromium, Dissolved	0.0500	0.0529		mg/L		106	80 - 120
Cobalt	0.0500	0.0530		mg/L		106	80 - 120
Cobalt, Dissolved	0.0500	0.0530		mg/L		106	80 - 120
Lead	0.0500	0.0522		mg/L		104	80 - 120
Lead, Dissolved	0.0500	0.0522		mg/L		104	80 - 120
Lithium	0.0500	0.0560		mg/L		112	80 - 120
Lithium, Dissolved	0.0500	0.0560		mg/L		112	80 - 120
Molybdenum	0.0500	0.0489		mg/L		98	80 - 120
Molybdenum, Dissolved	0.0500	0.0489		mg/L		98	80 - 120
Selenium	0.0500	0.0497		mg/L		99	80 - 120
Selenium, Dissolved	0.0500	0.0497		mg/L		99	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120
Thallium, Dissolved	0.0100	0.0102		mg/L		102	80 - 120

Lab Sample ID: 400-159905-E-1-B MS ^5
Matrix: Water
Analysis Batch: 415796

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 415589

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0510		mg/L		102	75 - 125
Antimony, Dissolved	<0.0010		0.0500	0.0510		mg/L		102	75 - 125
Arsenic	0.0019		0.0500	0.0517		mg/L		100	75 - 125
Arsenic, Dissolved	0.0019		0.0500	0.0517		mg/L		100	75 - 125
Barium	0.023		0.0500	0.0730		mg/L		100	75 - 125
Barium, Dissolved	0.023		0.0500	0.0730		mg/L		100	75 - 125
Beryllium	<0.00034		0.0500	0.0489		mg/L		98	75 - 125
Beryllium, Dissolved	<0.00034		0.0500	0.0489		mg/L		98	75 - 125
Boron	<0.021		0.100	0.101		mg/L		101	75 - 125
Boron, Dissolved	<0.021		0.100	0.101		mg/L		101	75 - 125
Cadmium	<0.00034		0.0500	0.0511		mg/L		102	75 - 125
Cadmium, Dissolved	<0.00034		0.0500	0.0511		mg/L		102	75 - 125
Calcium	1.1		5.00	5.98		mg/L		97	75 - 125
Calcium, Dissolved	1.1		5.00	5.98		mg/L		97	75 - 125
Chromium	<0.0011		0.0500	0.0538		mg/L		108	75 - 125
Chromium, Dissolved	<0.0011		0.0500	0.0538		mg/L		108	75 - 125
Cobalt	0.0011	J	0.0500	0.0528		mg/L		103	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-159905-E-1-B MS ^5
Matrix: Water
Analysis Batch: 415796

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 415589

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt, Dissolved	0.0011	J	0.0500	0.0528		mg/L		103	75 - 125
Lead	<0.00035		0.0500	0.0489		mg/L		98	75 - 125
Lead, Dissolved	<0.00035		0.0500	0.0489		mg/L		98	75 - 125
Lithium	0.0023	J B	0.0500	0.0559		mg/L		107	75 - 125
Lithium, Dissolved	0.0023	J B	0.0500	0.0559		mg/L		107	75 - 125
Molybdenum	<0.00085		0.0500	0.0489		mg/L		98	75 - 125
Molybdenum, Dissolved	<0.00085		0.0500	0.0489		mg/L		98	75 - 125
Selenium	<0.00024		0.0500	0.0475		mg/L		95	75 - 125
Selenium, Dissolved	<0.00024		0.0500	0.0475		mg/L		95	75 - 125
Thallium	<0.000085		0.0100	0.00970		mg/L		97	75 - 125
Thallium, Dissolved	<0.000085		0.0100	0.00970		mg/L		97	75 - 125

Lab Sample ID: 400-159905-E-1-C MSD ^5
Matrix: Water
Analysis Batch: 415796

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 415589

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0495		mg/L		99	75 - 125	3	20
Antimony, Dissolved	<0.0010		0.0500	0.0495		mg/L		99	75 - 125	3	20
Arsenic	0.0019		0.0500	0.0515		mg/L		99	75 - 125	0	20
Arsenic, Dissolved	0.0019		0.0500	0.0515		mg/L		99	75 - 125	0	20
Barium	0.023		0.0500	0.0727		mg/L		100	75 - 125	0	20
Barium, Dissolved	0.023		0.0500	0.0727		mg/L		100	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0489		mg/L		98	75 - 125	0	20
Beryllium, Dissolved	<0.00034		0.0500	0.0489		mg/L		98	75 - 125	0	20
Boron	<0.021		0.100	0.100		mg/L		100	75 - 125	0	20
Boron, Dissolved	<0.021		0.100	0.100		mg/L		100	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	1	20
Cadmium, Dissolved	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	1	20
Calcium	1.1		5.00	5.98		mg/L		97	75 - 125	0	20
Calcium, Dissolved	1.1		5.00	5.98		mg/L		97	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0540		mg/L		108	75 - 125	0	20
Chromium, Dissolved	<0.0011		0.0500	0.0540		mg/L		108	75 - 125	0	20
Cobalt	0.0011	J	0.0500	0.0536		mg/L		105	75 - 125	2	20
Cobalt, Dissolved	0.0011	J	0.0500	0.0536		mg/L		105	75 - 125	2	20
Lead	<0.00035		0.0500	0.0490		mg/L		98	75 - 125	0	20
Lead, Dissolved	<0.00035		0.0500	0.0490		mg/L		98	75 - 125	0	20
Lithium	0.0023	J B	0.0500	0.0549		mg/L		105	75 - 125	2	20
Lithium, Dissolved	0.0023	J B	0.0500	0.0549		mg/L		105	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0471		mg/L		94	75 - 125	4	20
Molybdenum, Dissolved	<0.00085		0.0500	0.0471		mg/L		94	75 - 125	4	20
Selenium	<0.00024		0.0500	0.0456		mg/L		91	75 - 125	4	20
Selenium, Dissolved	<0.00024		0.0500	0.0456		mg/L		91	75 - 125	4	20
Thallium	<0.000085		0.0100	0.00996		mg/L		100	75 - 125	3	20
Thallium, Dissolved	<0.000085		0.0100	0.00996		mg/L		100	75 - 125	3	20

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-415706/1-A ^5
Matrix: Water
Analysis Batch: 415935

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 415706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/16/18 18:55	10/17/18 12:26	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		10/16/18 18:55	10/17/18 12:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 12:26	5
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		10/16/18 18:55	10/17/18 12:26	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 12:26	5
Barium, Dissolved	<0.00049		0.0025	0.00049	mg/L		10/16/18 18:55	10/17/18 12:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 12:26	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 12:26	5
Boron	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 12:26	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		10/16/18 18:55	10/17/18 12:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 12:26	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		10/16/18 18:55	10/17/18 12:26	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 12:26	5
Calcium, Dissolved	<0.13		0.25	0.13	mg/L		10/16/18 18:55	10/17/18 12:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 12:26	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		10/16/18 18:55	10/17/18 12:26	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 12:26	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		10/16/18 18:55	10/17/18 12:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 12:26	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		10/16/18 18:55	10/17/18 12:26	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 12:26	5
Lithium, Dissolved	<0.0011		0.0050	0.0011	mg/L		10/16/18 18:55	10/17/18 12:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 12:26	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		10/16/18 18:55	10/17/18 12:26	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 12:26	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		10/16/18 18:55	10/17/18 12:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 12:26	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		10/16/18 18:55	10/17/18 12:26	5

Lab Sample ID: LCS 400-415706/2-A
Matrix: Water
Analysis Batch: 415935

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0532		mg/L		106	80 - 120
Antimony, Dissolved	0.0500	0.0532		mg/L		106	80 - 120
Arsenic	0.0500	0.0542		mg/L		108	80 - 120
Arsenic, Dissolved	0.0500	0.0542		mg/L		108	80 - 120
Barium	0.0500	0.0497		mg/L		99	80 - 120
Barium, Dissolved	0.0500	0.0497		mg/L		99	80 - 120
Beryllium	0.0500	0.0543		mg/L		109	80 - 120
Beryllium, Dissolved	0.0500	0.0543		mg/L		109	80 - 120
Boron	0.100	0.108		mg/L		108	80 - 120
Boron, Dissolved	0.100	0.108		mg/L		108	80 - 120
Cadmium	0.0500	0.0520		mg/L		104	80 - 120
Cadmium, Dissolved	0.0500	0.0520		mg/L		104	80 - 120
Calcium	5.00	5.43		mg/L		109	80 - 120
Calcium, Dissolved	5.00	5.43		mg/L		109	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-415706/2-A
Matrix: Water
Analysis Batch: 415935

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Chromium	0.0500	0.0522		mg/L		104		80 - 120
Chromium, Dissolved	0.0500	0.0522		mg/L		104		80 - 120
Cobalt	0.0500	0.0545		mg/L		109		80 - 120
Cobalt, Dissolved	0.0500	0.0545		mg/L		109		80 - 120
Lead	0.0500	0.0518		mg/L		104		80 - 120
Lead, Dissolved	0.0500	0.0518		mg/L		104		80 - 120
Lithium	0.0500	0.0554		mg/L		111		80 - 120
Lithium, Dissolved	0.0500	0.0554		mg/L		111		80 - 120
Molybdenum	0.0500	0.0516		mg/L		103		80 - 120
Molybdenum, Dissolved	0.0500	0.0516		mg/L		103		80 - 120
Selenium	0.0500	0.0545		mg/L		109		80 - 120
Selenium, Dissolved	0.0500	0.0545		mg/L		109		80 - 120
Thallium	0.0100	0.0105		mg/L		105		80 - 120
Thallium, Dissolved	0.0100	0.0105		mg/L		105		80 - 120

Lab Sample ID: 400-160308-4 MS
Matrix: Water
Analysis Batch: 415935

Client Sample ID: GWA-2A
Prep Type: Total Recoverable
Prep Batch: 415706

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
Antimony, Dissolved	<0.0010		0.0500	0.0563		mg/L		113		75 - 125
Arsenic	<0.00046		0.0500	0.0553		mg/L		111		75 - 125
Arsenic, Dissolved	<0.00046		0.0500	0.0553		mg/L		111		75 - 125
Barium	0.040		0.0500	0.0925		mg/L		105		75 - 125
Barium, Dissolved	0.040		0.0500	0.0925		mg/L		105		75 - 125
Beryllium	<0.00034		0.0500	0.0553		mg/L		111		75 - 125
Beryllium, Dissolved	<0.00034		0.0500	0.0553		mg/L		111		75 - 125
Boron	<0.021		0.100	0.115		mg/L		115		75 - 125
Boron, Dissolved	<0.021		0.100	0.115		mg/L		115		75 - 125
Cadmium	<0.00034		0.0500	0.0545		mg/L		109		75 - 125
Cadmium, Dissolved	<0.00034		0.0500	0.0545		mg/L		109		75 - 125
Calcium	3.7		5.00	9.12		mg/L		109		75 - 125
Calcium, Dissolved	3.7		5.00	9.12		mg/L		109		75 - 125
Chromium	0.0011	J	0.0500	0.0549		mg/L		108		75 - 125
Chromium, Dissolved	0.0011	J	0.0500	0.0549		mg/L		108		75 - 125
Cobalt	0.00041	J	0.0500	0.0567		mg/L		113		75 - 125
Cobalt, Dissolved	0.00041	J	0.0500	0.0567		mg/L		113		75 - 125
Lead	<0.00035		0.0500	0.0529		mg/L		106		75 - 125
Lead, Dissolved	<0.00035		0.0500	0.0529		mg/L		106		75 - 125
Lithium	0.011		0.0500	0.0669		mg/L		113		75 - 125
Lithium, Dissolved	0.011		0.0500	0.0669		mg/L		113		75 - 125
Molybdenum	<0.00085		0.0500	0.0527		mg/L		105		75 - 125
Molybdenum, Dissolved	<0.00085		0.0500	0.0527		mg/L		105		75 - 125
Selenium	0.0026		0.0500	0.0582		mg/L		111		75 - 125
Selenium, Dissolved	0.0026		0.0500	0.0582		mg/L		111		75 - 125
Thallium	<0.000085		0.0100	0.0108		mg/L		108		75 - 125
Thallium, Dissolved	<0.000085		0.0100	0.0108		mg/L		108		75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-160308-4 MSD
Matrix: Water
Analysis Batch: 415935

Client Sample ID: GWA-2A
Prep Type: Total Recoverable
Prep Batch: 415706

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	5	20
Antimony, Dissolved	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	5	20
Arsenic	<0.00046		0.0500	0.0540		mg/L		108	75 - 125	2	20
Arsenic, Dissolved	<0.00046		0.0500	0.0540		mg/L		108	75 - 125	2	20
Barium	0.040		0.0500	0.0888		mg/L		97	75 - 125	4	20
Barium, Dissolved	0.040		0.0500	0.0888		mg/L		97	75 - 125	4	20
Beryllium	<0.00034		0.0500	0.0538		mg/L		108	75 - 125	3	20
Beryllium, Dissolved	<0.00034		0.0500	0.0538		mg/L		108	75 - 125	3	20
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125	5	20
Boron, Dissolved	<0.021		0.100	0.110		mg/L		110	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0540		mg/L		108	75 - 125	1	20
Cadmium, Dissolved	<0.00034		0.0500	0.0540		mg/L		108	75 - 125	1	20
Calcium	3.7		5.00	8.88		mg/L		104	75 - 125	3	20
Calcium, Dissolved	3.7		5.00	8.88		mg/L		104	75 - 125	3	20
Chromium	0.0011	J	0.0500	0.0544		mg/L		106	75 - 125	1	20
Chromium, Dissolved	0.0011	J	0.0500	0.0544		mg/L		106	75 - 125	1	20
Cobalt	0.00041	J	0.0500	0.0554		mg/L		110	75 - 125	2	20
Cobalt, Dissolved	0.00041	J	0.0500	0.0554		mg/L		110	75 - 125	2	20
Lead	<0.00035		0.0500	0.0512		mg/L		102	75 - 125	3	20
Lead, Dissolved	<0.00035		0.0500	0.0512		mg/L		102	75 - 125	3	20
Lithium	0.011		0.0500	0.0653		mg/L		110	75 - 125	2	20
Lithium, Dissolved	0.011		0.0500	0.0653		mg/L		110	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0494		mg/L		99	75 - 125	6	20
Molybdenum, Dissolved	<0.00085		0.0500	0.0494		mg/L		99	75 - 125	6	20
Selenium	0.0026		0.0500	0.0548		mg/L		104	75 - 125	6	20
Selenium, Dissolved	0.0026		0.0500	0.0548		mg/L		104	75 - 125	6	20
Thallium	<0.00085		0.0100	0.0105		mg/L		105	75 - 125	3	20
Thallium, Dissolved	<0.00085		0.0100	0.0105		mg/L		105	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-416091/13-A
Matrix: Water
Analysis Batch: 416630

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416091

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/19/18 10:16	10/23/18 09:43	1
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		10/19/18 10:16	10/23/18 09:43	1

Lab Sample ID: LCS 400-416091/14-A
Matrix: Water
Analysis Batch: 416630

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416091

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00102		mg/L		102	80 - 120
Mercury, Dissolved	0.00101	0.00102		mg/L		102	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
SDG: Inactive CCR Landfill No. 3

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-160526-H-3-C MS

Matrix: Water
Analysis Batch: 416630

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 416091

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
Mercury, Dissolved	<0.000070		0.00201	0.00203		mg/L		101	80 - 120

Lab Sample ID: 400-160526-H-3-D MSD

Matrix: Water
Analysis Batch: 416630

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 416091

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00201		mg/L		100	80 - 120	1	20
Mercury, Dissolved	<0.000070		0.00201	0.00201		mg/L		100	80 - 120	1	20

Lab Sample ID: MB 400-416643/14-A

Matrix: Water
Analysis Batch: 416999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 09:58	1
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		10/23/18 16:33	10/25/18 09:58	1

Lab Sample ID: LCS 400-416643/15-A

Matrix: Water
Analysis Batch: 416999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000970		mg/L		96	80 - 120
Mercury, Dissolved	0.00101	0.000970		mg/L		96	80 - 120

Lab Sample ID: 400-160308-1 MS

Matrix: Water
Analysis Batch: 416999

Client Sample ID: GWA-1A
Prep Type: Total/NA
Prep Batch: 416643

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00201		mg/L		100	80 - 120
Mercury, Dissolved	<0.000070		0.00201	0.00201		mg/L		100	80 - 120

Lab Sample ID: 400-160308-1 MSD

Matrix: Water
Analysis Batch: 416999

Client Sample ID: GWA-1A
Prep Type: Total/NA
Prep Batch: 416643

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00205		mg/L		102	80 - 120	2	20
Mercury, Dissolved	<0.000070		0.00201	0.00205		mg/L		102	80 - 120	2	20

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-415223/1
Matrix: Water
Analysis Batch: 415223

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			10/12/18 16:28	1

Lab Sample ID: LCS 400-415223/2
Matrix: Water
Analysis Batch: 415223

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	228		mg/L		78	78 - 122

Lab Sample ID: 400-160308-6 DU
Matrix: Water
Analysis Batch: 415223

Client Sample ID: GWA-3B
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: MB 400-415289/1
Matrix: Water
Analysis Batch: 415289

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			10/13/18 10:40	1

Lab Sample ID: LCS 400-415289/2
Matrix: Water
Analysis Batch: 415289

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: 400-160329-A-3 DU
Matrix: Water
Analysis Batch: 415289

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	44		44.0		mg/L		0	5

Lab Sample ID: 400-160342-B-10 DU
Matrix: Water
Analysis Batch: 415289

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	80		80.0		mg/L		0	5

Lab Sample ID: MB 400-415521/1
Matrix: Water
Analysis Batch: 415521

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			10/15/18 16:53	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-1
 SDG: Inactive CCR Landfill No. 3

Lab Sample ID: LCS 400-415521/2
Matrix: Water
Analysis Batch: 415521

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	308		mg/L		105	78 - 122

Lab Sample ID: 400-160351-D-1 DU
Matrix: Water
Analysis Batch: 415521

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	68		68.0		mg/L		0	5

Lab Sample ID: 400-160351-D-2 DU
Matrix: Water
Analysis Batch: 415521

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	150		156		mg/L		1	5


- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Chain of Custody Record

Client Information Client Contact: Ms. Lauren Peity Southern Company Address: PO BOX 2641 GSC8 Birmingham AL, 35291 Phone: 205-992-5417(Tel) Email: lmpetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site: Inactive CCR LANDFILL NO. 3		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): Page 1 of 1 Job #:		COC No:	
Due Date Requested: TAT Requested (days): Standard		PO #: SCS10347656 WO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Date: 10/8/18		Sample Time: 13:20		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=organic, I=inorganic)	
Sample Identification: GWA-1A GWA-7 - FILTERED GWA-7A GWA-2A GWA-2B GWA-3B GWA-4 GWA-5 FB-01		Preservation Code:		6020-Sp.As.Bz.Be.Ca.Cd.Cr.Co.Pb.Li.Mn.Se.Ti, 7470A-Hg Sulfate 2540C - TDS, 300_ORGPM, 280 - Chlord, Fluoride & 9316_Ra226, 9320_Ra228, Ra228R=228_GFP		Total Number of Containers	
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: Background Event	
Empty Kit Relinquished by: Peter Adams		Date: 10/8		Method of Shipment:		Special Instructions/OC Requirements:	
Relinquished by: Peter Adams		Date/Time: 10/8		Received by: FEDEX		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time: 10.9.18 9:54	
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: 0.00, 4.00, 4.70, 4.8		Company: THAFEN Company	



Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site: Inactive CCR LANDFILL NO. 3		Lab PM: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab No: 2 Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): Standard		Analysis Requested  400-160308 COC	
PO #: SCS10347656 WO #:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSC04 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Matrix (W=water, S=solid, O=organic, A=air) Sample Type (C=comp, G=grab) Preservation Code:		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Date Sample Time Matrix		Total Number of containers: 3 Special Instructions/Notes: Background Event All radon bottles in separate coolers	
Sample Identification GWC-6 GWA-7 GWA-3A GWC-2 GWC-4A GWC-3 GWC-1 GWC-5 FB-02 FERB-01 FERB-02		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 9316_Ra226, 9320_Ra228, Ra226Ra228 GFC 240C - TD9, 300_ORGFM_280 - Chonde, Fluoride & Sulfate 6020-Sp,As,Ba,Bi,Ba,Ca,Cd,Cr,Co,Pb,LI,Mo,Se,TL, 7470A-Hg	
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 Manifests	
Empty Kit Relinquished by: Peter Adams Relinquished by: Peter Adams Relinquished by:		Special Instructions/QC Requirements: Method of Shipment:	
Date/Time: 10/9/18 18:30 Date/Time: Date/Time:		Date/Time: Date/Time: 10-10-18 0858 Date/Time:	
Company: GEI Company: Company:		Company: Company: TAPEN Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.: 310°C, 2.0°C, 31.0°C TR8 5.5°C	



Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site: Inactive CCR LANDFILL NO. 3		Sampler: V. ADAMS, J. ADAMS, L. COLE, L. COLE Lab PM: Whitmire, Cheyenne R. Phone: 6784679260 E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: 2 Page: 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): <i>Standard</i>		Analysis Requested			
PO #: SCS10347656 WO #:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Matrix (Weigher, Sorbent, Other (Specify)) Sample Type (C=comp, G=grab) Sample Time Sample Date Preservation Code:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) Sulfate 2640C - TD5, 300, OROFM, 28D - Chloride, Fluoride & 9316, Ra226, 9320, Ra228, Ra226Ra228, GPPC 6020-Sp, As, B, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Sn, Tl, 7470A-Hg			
Sample Identification GWA-3A-FILTERED DUP-01 DUP-02		Total Number of containers 3 Special Instructions/Note: Background Event			
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: Peter Adams Date/Time: 10/9/18 18:30		Relinquished by: [Signature] Date/Time: 10/10/18 08:58			
Relinquished by:		Relinquished by:			
Relinquished by:		Relinquished by:			
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-160308-1
SDG Number: Inactive CCR Landfill No. 3

Login Number: 160308

List Number: 1

Creator: Whitmire, Cheyenne R

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, 4.0°C & 4.2°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: 400-160308-1
SDG: Inactive CCR Landfill No. 3

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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* 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: 400-160308-2

TestAmerica SDG: Inactive CCR Landfill No. 3

Client Project/Site: CCR - Plant McIntosh

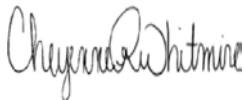
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

11/8/2018 5:40:33 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1

2

3

4

5

6

7

8

9

10

11

12

13



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	29
Chronicle	30
QC Association	36
QC Sample Results	38
Chain of Custody	42
Receipt Checklists	45
Certification Summary	47

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Job ID: 400-160308-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-160308-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-395181: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-1A (400-160308-1), GWA-7-FILTERED (400-160308-2), GWA-7A (400-160308-3), GWA-2A (400-160308-4), GWA-2B (400-160308-5), GWA-3B (400-160308-6), GWA-4 (400-160308-7), GWA-5 (400-160308-8), FB-01 (400-160308-9), GWC-6 (400-160308-10), GWA-7 (400-160308-11), GWA-3A (400-160308-12), GWC-2 (400-160308-13), GWC-4A (400-160308-14), GWC-3 (400-160308-15), GWC-1 (400-160308-16), GWC-5 (400-160308-17), FB-02 (400-160308-18), FERB-01 (400-160308-19) and FERB-02 (400-160308-20). 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 160-395165: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: GWA-1A (400-160308-1), GWA-7-FILTERED (400-160308-2), GWA-7A (400-160308-3), GWA-2A (400-160308-4), GWA-2B (400-160308-5), GWA-3B (400-160308-6), GWA-4 (400-160308-7), GWA-5 (400-160308-8), FB-01 (400-160308-9), GWC-6 (400-160308-10), GWA-7 (400-160308-11), GWA-3A (400-160308-12), GWC-2 (400-160308-13), GWC-4A (400-160308-14), GWC-3 (400-160308-15), GWC-1 (400-160308-16), GWC-5 (400-160308-17), FB-02 (400-160308-18), FERB-01 (400-160308-19) and FERB-02 (400-160308-20). 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: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160308-1	GWA-1A	Water	10/08/18 13:20	10/09/18 08:54
400-160308-2	GWA-7-FILTERED	Water	10/08/18 15:10	10/09/18 08:54
400-160308-3	GWA-7A	Water	10/08/18 16:20	10/09/18 08:54
400-160308-4	GWA-2A	Water	10/08/18 13:17	10/09/18 08:54
400-160308-5	GWA-2B	Water	10/08/18 15:00	10/09/18 08:54
400-160308-6	GWA-3B	Water	10/08/18 16:15	10/09/18 08:54
400-160308-7	GWA-4	Water	10/08/18 15:50	10/09/18 08:54
400-160308-8	GWA-5	Water	10/08/18 16:55	10/09/18 08:54
400-160308-9	FB-01	Water	10/08/18 17:30	10/09/18 08:54
400-160308-10	GWC-6	Water	10/09/18 08:50	10/10/18 08:58
400-160308-11	GWA-7	Water	10/09/18 09:35	10/10/18 08:58
400-160308-12	GWA-3A	Water	10/09/18 11:25	10/10/18 08:58
400-160308-13	GWC-2	Water	10/09/18 09:00	10/10/18 08:58
400-160308-14	GWC-4A	Water	10/09/18 11:40	10/10/18 08:58
400-160308-15	GWC-3	Water	10/09/18 08:50	10/10/18 08:58
400-160308-16	GWC-1	Water	10/09/18 10:35	10/10/18 08:58
400-160308-17	GWC-5	Water	10/09/18 12:10	10/10/18 08:58
400-160308-18	FB-02	Water	10/09/18 12:20	10/10/18 08:58
400-160308-19	FERB-01	Water	10/09/18 12:25	10/10/18 08:58
400-160308-20	FERB-02	Water	10/09/18 12:40	10/10/18 08:58
400-160308-21	GWA-3A-FILTERED	Water	10/09/18 10:50	10/10/18 08:58
400-160308-22	DUP-01	Water	10/09/18 00:00	10/10/18 08:58
400-160308-23	DUP-02	Water	10/09/18 00:00	10/10/18 08:58

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-1A

Lab Sample ID: 400-160308-1

Date Collected: 10/08/18 13:20

Matrix: Water

Date Received: 10/09/18 08:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.342		0.130	0.134	1.00	0.138	pCi/L	10/15/18 09:39	11/06/18 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/15/18 09:39	11/06/18 10:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.122	U	0.244	0.244	1.00	0.416	pCi/L	10/15/18 11:23	11/01/18 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					10/15/18 11:23	11/01/18 09:56	1
Y Carrier	76.6		40 - 110					10/15/18 11:23	11/01/18 09:56	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	0.465		0.276	0.278	5.00	0.416	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 400-160308-2

Date Collected: 10/08/18 15:10

Matrix: Water

Date Received: 10/09/18 08:54

Method: 9315 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.418		0.141	0.146	1.00	0.133	pCi/L	10/15/18 09:39	11/06/18 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/15/18 09:39	11/06/18 10:58	1

Method: 9320 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0440	U	0.209	0.209	1.00	0.382	pCi/L	10/15/18 11:23	11/01/18 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/15/18 11:23	11/01/18 09:56	1
Y Carrier	80.0		40 - 110					10/15/18 11:23	11/01/18 09:56	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.375	U	0.252	0.255	5.00	0.382	pCi/L		11/08/18 16:55	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-7A
Date Collected: 10/08/18 16:20
Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-3
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.36		0.241	0.270	1.00	0.123	pCi/L	10/15/18 09:39	11/06/18 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/15/18 09:39	11/06/18 10:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.734		0.289	0.297	1.00	0.396	pCi/L	10/15/18 11:23	11/01/18 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/15/18 11:23	11/01/18 09:56	1
Y Carrier	74.4		40 - 110					10/15/18 11:23	11/01/18 09:56	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	2.10		0.376	0.401	5.00	0.396	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2A

Lab Sample ID: 400-160308-4

Date Collected: 10/08/18 13:17

Matrix: Water

Date Received: 10/09/18 08:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.427		0.141	0.146	1.00	0.130	pCi/L	10/15/18 09:39	11/06/18 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/15/18 09:39	11/06/18 10:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.140	U	0.235	0.236	1.00	0.399	pCi/L	10/15/18 11:23	11/01/18 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/15/18 11:23	11/01/18 09:56	1
Y Carrier	75.1		40 - 110					10/15/18 11:23	11/01/18 09:56	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	0.567		0.274	0.278	5.00	0.399	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2B

Lab Sample ID: 400-160308-5

Date Collected: 10/08/18 15:00

Matrix: Water

Date Received: 10/09/18 08:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.595		0.168	0.176	1.00	0.145	pCi/L	10/15/18 09:39	11/06/18 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					10/15/18 09:39	11/06/18 10:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.514	U	0.383	0.386	1.00	0.603	pCi/L	10/15/18 11:23	11/01/18 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					10/15/18 11:23	11/01/18 09:56	1
Y Carrier	55.0		40 - 110					10/15/18 11:23	11/01/18 09:56	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	1.11		0.418	0.424	5.00	0.603	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3B

Lab Sample ID: 400-160308-6

Date Collected: 10/08/18 16:15

Matrix: Water

Date Received: 10/09/18 08:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.562		0.149	0.158	1.00	0.101	pCi/L	10/15/18 09:39	11/06/18 10:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/15/18 09:39	11/06/18 10:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.423		0.242	0.245	1.00	0.364	pCi/L	10/15/18 11:23	11/01/18 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/15/18 11:23	11/01/18 09:56	1
Y Carrier	80.4		40 - 110					10/15/18 11:23	11/01/18 09:56	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	0.985		0.284	0.292	5.00	0.364	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-4
Date Collected: 10/08/18 15:50
Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-7
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	0.379		0.132	0.136	1.00	0.123	pCi/L	10/15/18 09:39	11/06/18 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					10/15/18 09:39	11/06/18 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.677		0.315	0.322	1.00	0.460	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	72.1		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-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		0.342	0.350	5.00	0.460	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-5

Date Collected: 10/08/18 16:55

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-8

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	0.636		0.157	0.167	1.00	0.104	pCi/L	10/15/18 09:39	11/06/18 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/15/18 09:39	11/06/18 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.836		0.268	0.279	1.00	0.346	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	77.4		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.47		0.311	0.325	5.00	0.346	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: FB-01
Date Collected: 10/08/18 17:30
Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-9
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	0.153		0.0833	0.0845	1.00	0.0914	pCi/L	10/15/18 09:39	11/06/18 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/15/18 09:39	11/06/18 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0551	U	0.254	0.254	1.00	0.464	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	67.7		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.153	U	0.267	0.268	5.00	0.464	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-6
Date Collected: 10/09/18 08:50
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-10
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	0.323		0.125	0.128	1.00	0.133	pCi/L	10/15/18 09:39	11/06/18 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 09:39	11/06/18 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.143	U	0.232	0.232	1.00	0.392	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	75.1		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.466		0.264	0.265	5.00	0.392	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-7
Date Collected: 10/09/18 09:35
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-11
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	0.299		0.124	0.127	1.00	0.136	pCi/L	10/15/18 09:39	11/06/18 10:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 09:39	11/06/18 10:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.196	U	0.201	0.202	1.00	0.327	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	81.9		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.495		0.236	0.239	5.00	0.327	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A
Date Collected: 10/09/18 11:25
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-12
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	0.565		0.146	0.154	1.00	0.106	pCi/L	10/15/18 09:39	11/06/18 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/15/18 09:39	11/06/18 11:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.276	U	0.223	0.224	1.00	0.352	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	77.4		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.841		0.267	0.272	5.00	0.352	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-2
Date Collected: 10/09/18 09:00
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-13
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	0.567		0.147	0.155	1.00	0.106	pCi/L	10/15/18 09:39	11/06/18 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/15/18 09:39	11/06/18 11:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.145	U	0.242	0.242	1.00	0.409	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	74.4		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.712		0.283	0.287	5.00	0.409	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-4A
Date Collected: 10/09/18 11:40
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-14
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	0.560		0.147	0.155	1.00	0.114	pCi/L	10/15/18 09:39	11/06/18 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 09:39	11/06/18 11:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.377		0.236	0.239	1.00	0.360	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	78.9		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.938		0.278	0.285	5.00	0.360	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-3

Date Collected: 10/09/18 08:50

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-15

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	0.383		0.124	0.129	1.00	0.106	pCi/L	10/15/18 09:39	11/06/18 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/15/18 09:39	11/06/18 11:01	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.224	U	0.201	0.202	1.00	0.321	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	81.9		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.607		0.236	0.240	5.00	0.321	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-1
Date Collected: 10/09/18 10:35
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-16
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	0.253		0.101	0.103	1.00	0.0945	pCi/L	10/15/18 09:39	11/06/18 13:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 09:39	11/06/18 13:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0735	U	0.188	0.188	1.00	0.356	pCi/L	10/15/18 11:23	11/01/18 09:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					10/15/18 11:23	11/01/18 09:57	1
Y Carrier	78.9		40 - 110					10/15/18 11:23	11/01/18 09:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.253	U	0.213	0.214	5.00	0.356	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-5
Date Collected: 10/09/18 12:10
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-17
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	2.54		0.282	0.363	1.00	0.0931	pCi/L	10/15/18 09:39	11/06/18 13:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					10/15/18 09:39	11/06/18 13:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.84		0.386	0.466	1.00	0.349	pCi/L	10/15/18 11:23	11/01/18 09:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					10/15/18 11:23	11/01/18 09:59	1
Y Carrier	82.2		40 - 110					10/15/18 11:23	11/01/18 09:59	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	5.38		0.478	0.591	5.00	0.349	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: FB-02
Date Collected: 10/09/18 12:20
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-18
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	0.128		0.0778	0.0786	1.00	0.0959	pCi/L	10/15/18 09:39	11/06/18 13:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/15/18 09:39	11/06/18 13:32	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	0.226	0.228	1.00	0.345	pCi/L	10/15/18 11:23	11/01/18 09:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/15/18 11:23	11/01/18 09:59	1
Y Carrier	76.3		40 - 110					10/15/18 11:23	11/01/18 09:59	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	0.470		0.239	0.241	5.00	0.345	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: FERB-01

Lab Sample ID: 400-160308-19

Date Collected: 10/09/18 12:25

Matrix: Water

Date Received: 10/10/18 08:58

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		0.0816	0.0824	1.00	0.104	pCi/L	10/15/18 09:39	11/06/18 13:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					10/15/18 09:39	11/06/18 13:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0761	U	0.249	0.249	1.00	0.435	pCi/L	10/15/18 11:23	11/01/18 09:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					10/15/18 11:23	11/01/18 09:59	1
Y Carrier	72.5		40 - 110					10/15/18 11:23	11/01/18 09:59	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	0.202	U	0.262	0.262	5.00	0.435	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: FERB-02

Lab Sample ID: 400-160308-20

Date Collected: 10/09/18 12:40

Matrix: Water

Date Received: 10/10/18 08:58

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.223		0.0928	0.0950	1.00	0.0871	pCi/L	10/15/18 09:39	11/06/18 13:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/15/18 09:39	11/06/18 13:32	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0828	U	0.173	0.174	1.00	0.300	pCi/L	10/15/18 11:23	11/01/18 09:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					10/15/18 11:23	11/01/18 09:59	1
Y Carrier	81.5		40 - 110					10/15/18 11:23	11/01/18 09:59	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	0.306		0.196	0.198	5.00	0.300	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A-FILTERED

Lab Sample ID: 400-160308-21

Date Collected: 10/09/18 10:50

Matrix: Water

Date Received: 10/10/18 08:58

Method: 9315 - Radium-226 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.403		0.103	0.109	1.00	0.0684	pCi/L	10/15/18 09:37	11/06/18 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/15/18 09:37	11/06/18 14:05	1

Method: 9320 - Radium-228 (GFPC) - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.300	U	0.218	0.220	1.00	0.341	pCi/L	10/15/18 10:08	10/26/18 17:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					10/15/18 10:08	10/26/18 17:10	1
Y Carrier	86.4		40 - 110					10/15/18 10:08	10/26/18 17:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 - Dissolved

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.703		0.241	0.246	5.00	0.341	pCi/L		11/08/18 16:55	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: DUP-01
Date Collected: 10/09/18 00:00
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-22
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.294		0.0931	0.0968	1.00	0.0788	pCi/L	10/15/18 09:37	11/06/18 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/15/18 09:37	11/06/18 14:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.340		0.215	0.217	1.00	0.325	pCi/L	10/15/18 10:08	10/26/18 17:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/15/18 10:08	10/26/18 17:10	1
Y Carrier	84.9		40 - 110					10/15/18 10:08	10/26/18 17:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.634		0.234	0.238	5.00	0.325	pCi/L		11/08/18 16:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: DUP-02

Date Collected: 10/09/18 00:00

Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-23

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	0.543		0.125	0.135	1.00	0.0863	pCi/L	10/15/18 09:37	11/06/18 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/15/18 09:37	11/06/18 14:05	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.203	U	0.209	0.210	1.00	0.340	pCi/L	10/15/18 10:08	10/26/18 17:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/15/18 10:08	10/26/18 17:10	1
Y Carrier	86.4		40 - 110					10/15/18 10:08	10/26/18 17:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.747		0.244	0.250	5.00	0.340	pCi/L		11/08/18 16:52	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-1A

Date Collected: 10/08/18 13:20

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:58	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-7-FILTERED

Date Collected: 10/08/18 15:10

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Dissolved	Analysis	9315		1	399568	11/06/18 10:58	CDR	TAL SL
Dissolved	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Dissolved	Analysis	9320		1	398697	11/01/18 09:56	CDR	TAL SL
Dissolved	Analysis	Ra226_Ra228		1	400043	11/08/18 16:55	RTM	TAL SL

Client Sample ID: GWA-7A

Date Collected: 10/08/18 16:20

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:58	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-2A

Date Collected: 10/08/18 13:17

Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:58	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-2B

Lab Sample ID: 400-160308-5

Date Collected: 10/08/18 15:00

Matrix: Water

Date Received: 10/09/18 08:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:58	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-3B

Lab Sample ID: 400-160308-6

Date Collected: 10/08/18 16:15

Matrix: Water

Date Received: 10/09/18 08:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:58	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:56	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-4

Lab Sample ID: 400-160308-7

Date Collected: 10/08/18 15:50

Matrix: Water

Date Received: 10/09/18 08:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:59	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-5

Lab Sample ID: 400-160308-8

Date Collected: 10/08/18 16:55

Matrix: Water

Date Received: 10/09/18 08:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:59	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: FB-01
Date Collected: 10/08/18 17:30
Date Received: 10/09/18 08:54

Lab Sample ID: 400-160308-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:59	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWC-6
Date Collected: 10/09/18 08:50
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:59	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-7
Date Collected: 10/09/18 09:35
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399568	11/06/18 10:59	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWA-3A
Date Collected: 10/09/18 11:25
Date Received: 10/10/18 08:58

Lab Sample ID: 400-160308-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399569	11/06/18 11:01	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-2

Lab Sample ID: 400-160308-13

Date Collected: 10/09/18 09:00

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399569	11/06/18 11:01	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWC-4A

Lab Sample ID: 400-160308-14

Date Collected: 10/09/18 11:40

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399569	11/06/18 11:01	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWC-3

Lab Sample ID: 400-160308-15

Date Collected: 10/09/18 08:50

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399569	11/06/18 11:01	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: GWC-1

Lab Sample ID: 400-160308-16

Date Collected: 10/09/18 10:35

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399570	11/06/18 13:32	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398697	11/01/18 09:57	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWC-5

Lab Sample ID: 400-160308-17

Date Collected: 10/09/18 12:10

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399570	11/06/18 13:32	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398696	11/01/18 09:59	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: FB-02

Lab Sample ID: 400-160308-18

Date Collected: 10/09/18 12:20

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399570	11/06/18 13:32	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398696	11/01/18 09:59	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: FERB-01

Lab Sample ID: 400-160308-19

Date Collected: 10/09/18 12:25

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399570	11/06/18 13:32	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398696	11/01/18 09:59	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: FERB-02

Lab Sample ID: 400-160308-20

Date Collected: 10/09/18 12:40

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395165	10/15/18 09:39	JLC	TAL SL
Total/NA	Analysis	9315		1	399570	11/06/18 13:32	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395181	10/15/18 11:23	JLC	TAL SL
Total/NA	Analysis	9320		1	398696	11/01/18 09:59	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Client Sample ID: GWA-3A-FILTERED

Lab Sample ID: 400-160308-21

Date Collected: 10/09/18 10:50

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	PrecSep-21			395164	10/15/18 09:37	JLC	TAL SL
Dissolved	Analysis	9315		1	399571	11/06/18 14:05	CDR	TAL SL
Dissolved	Prep	PrecSep_0			395171	10/15/18 10:08	JLC	TAL SL
Dissolved	Analysis	9320		1	397458	10/26/18 17:10	RTM	TAL SL
Dissolved	Analysis	Ra226_Ra228		1	400043	11/08/18 16:55	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-160308-22

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395164	10/15/18 09:37	JLC	TAL SL
Total/NA	Analysis	9315		1	399571	11/06/18 14:05	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395171	10/15/18 10:08	JLC	TAL SL
Total/NA	Analysis	9320		1	397458	10/26/18 17:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-160308-23

Date Collected: 10/09/18 00:00

Matrix: Water

Date Received: 10/10/18 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			395164	10/15/18 09:37	JLC	TAL SL
Total/NA	Analysis	9315		1	399571	11/06/18 14:05	CDR	TAL SL
Total/NA	Prep	PrecSep_0			395171	10/15/18 10:08	JLC	TAL SL
Total/NA	Analysis	9320		1	397458	10/26/18 17:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	400042	11/08/18 16:52	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Rad

Prep Batch: 395164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	PrecSep-21	
400-160308-22	DUP-01	Total/NA	Water	PrecSep-21	
400-160308-23	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-395164/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-395164/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
480-143229-E-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 395165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total/NA	Water	PrecSep-21	
400-160308-2	GWA-7-FILTERED	Dissolved	Water	PrecSep-21	
400-160308-3	GWA-7A	Total/NA	Water	PrecSep-21	
400-160308-4	GWA-2A	Total/NA	Water	PrecSep-21	
400-160308-5	GWA-2B	Total/NA	Water	PrecSep-21	
400-160308-6	GWA-3B	Total/NA	Water	PrecSep-21	
400-160308-7	GWA-4	Total/NA	Water	PrecSep-21	
400-160308-8	GWA-5	Total/NA	Water	PrecSep-21	
400-160308-9	FB-01	Total/NA	Water	PrecSep-21	
400-160308-10	GWC-6	Total/NA	Water	PrecSep-21	
400-160308-11	GWA-7	Total/NA	Water	PrecSep-21	
400-160308-12	GWA-3A	Total/NA	Water	PrecSep-21	
400-160308-13	GWC-2	Total/NA	Water	PrecSep-21	
400-160308-14	GWC-4A	Total/NA	Water	PrecSep-21	
400-160308-15	GWC-3	Total/NA	Water	PrecSep-21	
400-160308-16	GWC-1	Total/NA	Water	PrecSep-21	
400-160308-17	GWC-5	Total/NA	Water	PrecSep-21	
400-160308-18	FB-02	Total/NA	Water	PrecSep-21	
400-160308-19	FERB-01	Total/NA	Water	PrecSep-21	
400-160308-20	FERB-02	Total/NA	Water	PrecSep-21	
MB 160-395165/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-395165/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-395165/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 395171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-21	GWA-3A-FILTERED	Dissolved	Water	PrecSep_0	
400-160308-22	DUP-01	Total/NA	Water	PrecSep_0	
400-160308-23	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-395171/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-395171/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
480-143229-E-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 395181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-1	GWA-1A	Total/NA	Water	PrecSep_0	
400-160308-2	GWA-7-FILTERED	Dissolved	Water	PrecSep_0	
400-160308-3	GWA-7A	Total/NA	Water	PrecSep_0	
400-160308-4	GWA-2A	Total/NA	Water	PrecSep_0	
400-160308-5	GWA-2B	Total/NA	Water	PrecSep_0	
400-160308-6	GWA-3B	Total/NA	Water	PrecSep_0	
400-160308-7	GWA-4	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Rad (Continued)

Prep Batch: 395181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160308-8	GWA-5	Total/NA	Water	PrecSep_0	
400-160308-9	FB-01	Total/NA	Water	PrecSep_0	
400-160308-10	GWC-6	Total/NA	Water	PrecSep_0	
400-160308-11	GWA-7	Total/NA	Water	PrecSep_0	
400-160308-12	GWA-3A	Total/NA	Water	PrecSep_0	
400-160308-13	GWC-2	Total/NA	Water	PrecSep_0	
400-160308-14	GWC-4A	Total/NA	Water	PrecSep_0	
400-160308-15	GWC-3	Total/NA	Water	PrecSep_0	
400-160308-16	GWC-1	Total/NA	Water	PrecSep_0	
400-160308-17	GWC-5	Total/NA	Water	PrecSep_0	
400-160308-18	FB-02	Total/NA	Water	PrecSep_0	
400-160308-19	FERB-01	Total/NA	Water	PrecSep_0	
400-160308-20	FERB-02	Total/NA	Water	PrecSep_0	
MB 160-395181/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-395181/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-395181/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-395164/23-A
Matrix: Water
Analysis Batch: 399571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395164

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1729		0.0722	0.0738	1.00	0.0664	pCi/L	10/15/18 09:37	11/06/18 14:06	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/15/18 09:37	11/06/18 14:06	1

Lab Sample ID: LCS 160-395164/1-A
Matrix: Water
Analysis Batch: 399571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395164

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.51		1.07	1.00	0.0919	pCi/L	93	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	102		40 - 110						

Lab Sample ID: 480-143229-E-1-A DU
Matrix: Water
Analysis Batch: 399571

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 395164

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.229		0.1864		0.0765	1.00	0.0667	pCi/L	0.26	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	98.5		40 - 110							

Lab Sample ID: MB 160-395165/23-A
Matrix: Water
Analysis Batch: 399570

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395165

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2159		0.0922	0.0943	1.00	0.0885	pCi/L	10/15/18 09:39	11/06/18 13:32	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					10/15/18 09:39	11/06/18 13:32	1

Lab Sample ID: LCS 160-395165/1-A
Matrix: Water
Analysis Batch: 399568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395165

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	11.59		1.23	1.00	0.125	pCi/L	102	68 - 137

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-395165/1-A
Matrix: Water
Analysis Batch: 399568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395165

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	94.4		40 - 110

Lab Sample ID: LCSD 160-395165/2-A
Matrix: Water
Analysis Batch: 399568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 395165

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	11.78		1.25	1.00	0.127	pCi/L	104	68 - 137	0.08	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	97.6		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-395171/23-A
Matrix: Water
Analysis Batch: 397458

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395171

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1044	U	0.176	0.176	1.00	0.299	pCi/L	10/15/18 10:08	10/26/18 17:11	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	10/15/18 10:08	10/26/18 17:11	1
Y Carrier	87.9		40 - 110	10/15/18 10:08	10/26/18 17:11	1

Lab Sample ID: LCS 160-395171/1-A
Matrix: Water
Analysis Batch: 397458

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395171

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.28	9.355		1.08	1.00	0.393	pCi/L	101	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	84.1		40 - 110

Lab Sample ID: 480-143229-E-1-B DU
Matrix: Water
Analysis Batch: 397458

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 395171

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.201	U	0.1024	U	0.224	1.00	0.383	pCi/L	0.22	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 480-143229-E-1-B DU
Matrix: Water
Analysis Batch: 397458

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 395171

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	98.5		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: MB 160-395181/23-A
Matrix: Water
Analysis Batch: 398696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395181

Analyte	MB	MB	Count Uncert.	Total Uncert.	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3624		0.232	0.235	1.00	0.355	pCi/L	10/15/18 11:23	11/01/18 09:59	1

Carrier	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Yield	Qualifier				
Ba Carrier	98.8		40 - 110	10/15/18 11:23	11/01/18 09:59	1
Y Carrier	82.6		40 - 110	10/15/18 11:23	11/01/18 09:59	1

Lab Sample ID: LCS 160-395181/1-A
Matrix: Water
Analysis Batch: 398697

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395181

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert.	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.26	8.934		1.08	1.00	0.452	pCi/L	97	56 - 140

Carrier	LCS	LCS	Limits
	%Yield	Qualifier	
Ba Carrier	94.4		40 - 110
Y Carrier	75.9		40 - 110

Lab Sample ID: LCSD 160-395181/2-A
Matrix: Water
Analysis Batch: 398697

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 395181

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert.	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.26	8.654		1.05	1.00	0.429	pCi/L	93	56 - 140	0.13	1

Carrier	LCSD	LCSD	Limits
	%Yield	Qualifier	
Ba Carrier	97.6		40 - 110
Y Carrier	71.8		40 - 110

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
 SDG: Inactive CCR Landfill No. 3

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228


Lab Sample ID: 180-82652-A-2 DU
Matrix: Water
Analysis Batch: 400042

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	1.88		1.686		0.340	5.00	0.373	pCi/L	0.27	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Chain of Custody Record

Client Information Client Contact: Ms. Lauren Peity Southern Company Address: PO BOX 2641 GSC8 Birmingham AL, 35291 Phone: 205-992-5417(Tel) Email: lmpetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site: Inactive CCR LANDFILL NO. 3		Sampler: P. Adams, J. Adcock, L. Collier Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab #: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #: Project #: 40007700 SSON#:		Analysis Requested 400-160308 COC 	
Sample Identification GWA-1A GWA-7 - FILTERED GWA-7A GWA-2A GWA-2B GWA-3B GWA-4 GWA-5 FB-01		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 9316_Ra226, 9320_Ra226, Ra226R=228, GFPC 2540C - TDS, 300_ORGPM, 280 - Chlorda, Fluoride & Sulfate 6020-Sp,As,Bz,Bz,Bz,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Ti, T470A-Hg Total Number of Containers:	
Sample Date 10/8/18		Sample Time 13:20 15:10 16:20 13:17 15:00 16:15 15:50 16:55 17:30	
Sample Type (C=comp, G=grab) G		Preservation Code: Water	
Matrix (W=water, B=soil, O=organic, BT=Trace, AA=)		Special Instructions/Note: Background Event	
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: Peter Adams Date/Time: 10/8		Special Instructions/QC Requirements: <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Relinquished by: Peter Adams Date/Time:		Method of Shipment: Received by: FEDEX Date/Time:	
Relinquished by:		Received by: [Signature] Date/Time: 10.9.18 9:54 Company: THAFEN Company	
Relinquished by:		Received by: [Signature] Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks 0.00, 4.00, 4.70, 4.78	

Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site: Inactive CCR LANDFILL NO. 3		Lab PM: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab No: 2 Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): Standard		Analysis Requested  400-160308 COC	
Sample Identification GWC-6 GWA-7 GWA-3A GWC-2 GWC-4A GWC-3 GWC-1 GWC-5 FB-02 FERB-01 FERB-02		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSC04 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Date 10/9/18 Sample Time 8:50 9:35 11:25 9:00 11:40 08:50 10:35 12:10 12:20 12:25 12:40		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 9316_Ra226, 9320_Ra228, Ra226Ra228 GPC 240C - TD9, 300_ORGFM_280 - Chonde, Fluoride & Sulfate 6020-Sp,As,Ba,Bi,Bo,Ca,Cd,Cr,Co,Pb,Li,Mn,Mo,Se,Ti, T470A-Hg	
Sample Type (C=comp, G=grab) Preservation Code: G Water		Total Number of containers 3 Special Instructions/Notes: Background Event All radium bottles in separate coolers	
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: Peter Adams Date: 10/9/18 18:30 Company: GEI			
Relinquished by: Peter Adams Date/Time: 10-10-18 0858 Company: TAPEN			
Relinquished by: Date/Time: Company:			
Custody Seals Intact: Δ Yes Δ No Custody Seal No.: 310 C.I.V. 2.D.C. 31.0°C TR8 5.5°C			



Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Ash Landfill #3 Site: Inactive CCR LANDFILL NO. 3		Sampler: V. ADAMS, J. ADGOLK, L. C. BEER Lab PM: Whitmire, Cheyenne R. Phone: 6784679260 E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: 2 Page: 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): <i>Standard</i>		Analysis Requested			
PO #: SCS10347656 WO #:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Matrix (Weigher, Suspend, Other (Specify, A or B))		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Sample Identification GWA-3A-FILTERED DUP-01 DUP-02		Sample Date 10/9/18 ↓		Sample Time 10:50 ↓	
Sample Type (C=comp, G=grab) G		Preservation Code: G		Field Filtered Sample (Yes or No) Y	
Form MS/MSD (Yes or No) X		Perform MS/MSD (Yes or No) X		Total Number of Containers 3 ↓	
Special Instructions/Note: Background Event		Special Instructions/OC Requirements: <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: Peter Adams Date/Time: 10/9/18 18:30		Company: GEI		Date/Time: 10/10/18 08:58	
Relinquished by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-160308-2
SDG Number: Inactive CCR Landfill No. 3

Login Number: 160308

List Number: 1

Creator: Whitmire, Cheyenne R

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, 4.0°C & 4.2°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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-160308-2
SDG Number: Inactive CCR Landfill No. 3

Login Number: 160308

List Number: 2

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 10/12/18 10:44 AM

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.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0
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?	N/A	
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.	N/A	
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: 400-160308-2
SDG: Inactive CCR Landfill No. 3

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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-18 *
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh

TestAmerica Job ID: 400-160308-2
SDG: Inactive CCR Landfill No. 3

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
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

**Stage 2A Data Verification Report
Georgia Power
McIntosh Fossil Plant
Site Landfill 3
Coal Combustion Residuals Project
Groundwater Samples**

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the 108 groundwater samples collected as part of the eight rounds of 2016-2018 baseline monitoring, at the Georgia Power McIntosh Fossil Plant facility. These samples were collectively analyzed by TestAmerica Laboratories, Inc. (TestAmerica), of Pensacola, Florida, for total and dissolved metals by SW-846 Method 6020; for total and dissolved mercury by SW-846 Method 7470A; for total dissolved solids (TDS) by Standard Methods (SM) 2540C; and for total and dissolved anions (specifically, chloride, fluoride, and sulfate) by US EPA Method 300.0. In addition, these samples were collectively analyzed by TestAmerica of St. Louis, Missouri, for total and dissolved radium-226 by SW-846 Method 9315, for total and dissolved radium-228 by SW-846 Method 9320, and for combined radium-226+228 by calculation.

This review was performed with guidance from the US EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); the US EPA Region IV Data Validation Standard Operating Procedures (SOPs; US EPA Region IV, September 2011); and the applied analytical methods. These validation guidance documents, with the exception of the analytical methods, specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the SW-846, US EPA, and SM methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the SW-846, US EPA, and SM methods utilized by the laboratory.

Summary

The analytical results and associated laboratory quality control (QC) samples were reviewed to determine the integrity of the reported analytical results and to verify that the data met the established data quality objectives.

The following sampling events were evaluated as part of this QA review: Event 1, collected 8/30/2016 through 1/18/2017; Event 2, collected 1/19/2017 through 2/28/2017; Event 3, collected 7/17/2017 through 7/20/2017; Event 4, collected 9/20/2017 through 9/22/2017; Event 5, collected 1/8/2018 through 1/11/2018; Event 6, collected 3/27/2018 through 3/29/2018; and Event 8, collected 10/8/2018 and 10/9/2018.

The following samples were evaluated as part of this QA review: GWA-1, GWA-1 Filtered, GWA-1A, GWA-2, GWA-2 Filtered, GWA-2A, GWA-2B, GWA-3A, GWA-3A Filtered, GWA-3B, GWA-3B Filtered, GWA-4, GWA-5, GWA-7, GWA-7 Filtered, GWA-7A, GWC-1, GWC-2, GWC-3, GWC-4A, GWC-4B, GWC-5, GWC-6, and GWC-7 (Event 5 only).

The following TestAmerica inorganic Sample Delivery Groups (SDGs) were evaluated as part of this QA review: 400-126512-1, 400-131603-1, 400-132732-3, 400-132918-1, 400-132918-3, 400-133466-1, 400-134557-1, 400-140712-1, 400-140902-1, 400-143704-1, 400-148359-1, 400-151461-1, and 400-160308-1.

The following TestAmerica radiological SDGs were evaluated as part of this QA review: 400-126512-2, 400-132732-4, 400-132918-2, 400-132918-4, 400-133466-2, 400-134557-2, 400-140712-2, 400-140902-2, 400-143704-2, 400-148359-2, 400-151461-2, and 400-160308-2.

All data are considered usable as reported, or usable after integration of data validation qualifications.

Inorganic and Radiological Data Review

Data validation was performed for these samples based on the sample results, summary QC data, and raw data provided by the laboratory. The findings offered in this report for the inorganic analyses are based upon a review of the following QC measures:

- Sample condition upon laboratory receipt
- Chain-of-Custody (COC) Records
- Blank analysis results
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision
- Laboratory duplicate precision
- Total vs. dissolved results
- Sample holding times
- Case Narratives
- Chemical yield
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision
- Field duplicate precision

The above QC measures were evaluated against the analytical method requirements and QC acceptance criteria. The data were validated based on guidance from the US EPA Region IV Data Validation SOPs, the referenced procedures, and were qualified as appropriate as described in the sections below.

Comments and Exceptions

1. The data validator applied qualification to combined radium-226+228 based upon the QC samples associated with the analyses of the individual isotopes, radium-226 and radium-228. The electronic data deliverable (EDD) and the database only include the laboratory results for the combined radium-226+228; therefore, qualification of the individual isotopes is not addressed in this QA review.
2. SW-846 Method 9315 includes all alpha-emitting isotopes of radium. In order to analyze for only radium-226, a 21-day ingrowth period must be used. The radium-226 reported by the laboratory underwent a 21-day ingrowth; therefore, the results reported as radium-226 should not contain additional alpha-emitting radium isotopes.
3. Combined radium-226+228 was reported as the summation of the calculated activities for radium-226 and radium-228. As consistent with routine radiological reporting conventions, negative activities were reported for the radium-226 and radium-228 analyses. These negative activities were used in the calculation of combined radium-226+228 activity; therefore, it is possible for the combined radium-226+228 to be less than one of the individual isotopes.
4. The combined radium-226+228 sample-specific minimum detectable concentration (MDC) was reported as the higher of the MDCs for radium-226 and radium-228. Consequently, there may be instances where a detection was observed in one of the individual isotopes, but the combined radium-226+228 result was reported as "not-detected" due to the laboratory's reporting convention for combined radium-226+228.

5. The combined radium-226+228 result uncertainty was reported using the routine statistical uncertainty reporting conventions as the root sum square (RSS; the square root of the sum of the squared individual uncertainties).
6. In SDGs 400-151461-1 and 400-151461-2, the dates and times that the laboratory received the samples collected on 3/28/2018 cannot be confirmed with the COC record provided. The laboratory logged the samples in using two different receipt dates, even though all samples collected on 3/28/2018 were on the same COC record. Qualification of data due to this issue was not warranted.
7. In all SDGs containing radiological data, the laboratory did not provide the subcontracted COC record or the Sample Login Receipt Checklist from TestAmerica St. Louis. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
8. In SDGs 400-132732-4, 400-134557-2, 400-133466-2, 400-132918-2, 400-143704-2, and 400-140712-2, the laboratory did not provide a Case Narrative associated with the radium analysis. As this item was not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
9. In SDGs 400-140712-1 and 400-140712-2, the laboratory did not record the sample received dates and times for the samples collected on 7/19/2017 on the COC record provided. Qualification of data due to this issue was not warranted.
10. In all SDGs, sample custody was not completely clear on the COC records and Sample Login Receipt Checklists due to transfer of samples to different facilities within the TestAmerica network. It appears courier services were used from TestAmerica Savannah; however, the documentation on the COC record is limited and in some cases illegible. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
11. In the mercury fraction of SDG 400-126512-1, the data package provided did not include the associated LCS or MB results for prep batch 321179. Upon Environmental Standards' request, the laboratory provided a revised data package.
12. In SDG 400-160308-2, the combined radium-226+228 was reported as the summation of the calculated activities for radium-226 and radium-228; however, for samples GWC-1 and FB-01 incorrect summations were reported. Upon Environmental Standards' request, the laboratory provided a revised data package.
13. In several SDGs, significant differences in the TDS field duplicate analyses were identified by Environmental Standards. Upon Environmental Standards' inquiry, the laboratory responded that due to the low measured residue (near or below the 2.5 mg lower limit) for some samples, method precision had been negatively impacted. The laboratory indicated that improved precision could have been obtained if an increased volume of sample had been used; therefore, TDS results should be used with caution.

14. The following field duplicate pairs (see table) were submitted and analyzed for inorganic and radiological parameters with this data set. Acceptable precision and sample representativeness (the relative percent difference [RPD] between results was $\leq 20\%$ when both results were $\geq 5\times$ the reporting limit [RL], the difference between results was \leq the RL when at least one result was $< 5\times$ the RL, or replicate error ratio [RER] < 3) were demonstrated by the reported results in the field duplicate pair evaluation with the exception of the parameters indicated in the Overall Assessment of Data Section below.

<u>Laboratory SDG(s)</u>	<u>Sample</u>	<u>Field Duplicate</u>
400-126512-1 400-126512-2	GWC-4A	DUP-1
400-132918-3 400-132918-4	GWC-4A	DUP-1
400-140712-1 400-140712-2	GWA-2A	DUP-1
400-143704-1 400-143704-2	GWC-1	DUP-1
400-148359-1 400-148359-2	GWC-4B	DUP-1
400-148359-1 400-148359-2	GWC-5	DUP-2
400-151461-1 400-151461-2	GWC-1	DUP-1
400-151461-1 400-151461-2	GWC-3	DUP-2
400-160308-1 400-160308-2	GWC-3	DUP-1
400-160308-1 400-160308-2	GWC-2	DUP-2

Overall Assessment of Data

Based on a review of the data, qualification of data was warranted as noted below.

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
400-126512-1	1	GWA-3B, GWA-1, and GWA-2	dissolved mercury	U*	BL – Method blank contamination
400-126512-1	1	GWA-5, GWA-3B, GWC-2, GWC-4A, GWC-1, GWA-1, GWC-3, GWC-4B, GWC-5, and GWC-6	mercury	U*	BL – Method blank contamination BE – Equipment blank contamination
400-134557-1	2	GWA-1A and GWA-2A	fluoride	U*	BL – Method blank contamination
400-134557-1	2	GWA-2A	mercury	U*	BL – Method blank contamination
400-132918-2	2	GWC-2	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
400-133466-2	2	GWC-6	combined radium-226+228	U*	BF – Field blank contamination
400-132918-4	2	GWC-4A and GWC-4B	combined radium-226+228	U*	BF – Field blank contamination BE – Equipment blank contamination
400-140712-1	3	GWA-1A, GWA-2A, and GWA-5	arsenic	U*	BF – Field blank contamination
400-140712-1	3	GWA-3B, GWA-5, GWA-7, and GWC-2	vanadium	U*	BF – Field blank contamination
400-140902-1	3	GWC-4B, GWC-5, and GWC-6	arsenic	U*	BF – Field blank contamination
400-140902-1	3	GWC-4B and GWC-6	vanadium	U*	BF – Field blank contamination
400-140902-2	3	GWC-4A, GWC-3, and GWC-6	combined radium-226+228	U*	BL – Method blank contamination
400-143704-1	4	GWA-1A, GWA-7, GWA-3B, GWC-1, GWC-2, GWA-5, GWC-6, GWC-3, and GWC-4B	lead	U*	BF – Field blank contamination BE – Equipment blank contamination

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
400-151461-1	6	GWA-1A, GWA-2A, GWA-4, GWA-3A, GWA-5, and GWC-6	selenium	U*	BL – Method blank contamination
400-151461-1	6	GWA-4, GWA-3A, GWC-5, and GWC-2	lithium	U*	BL – Method blank contamination
400-160308-1	8	GWA-4, GWA-3A, GWC-1, and GWC-2	lithium	U*	BE – Equipment blank contamination
400-160308-1	8	GWA-7A	lithium	U*	BL – Method blank contamination
400-160308-2	8	GWA-2A, GWA-4, and GWC-3	combined radium-226+228	U*	BL – Method blank contamination BE – Equipment blank contamination
400-160308-2	8	GWA-1A, GWC-6, and GWA-7	combined radium-226+228	U*	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
400-132918-2	2	GWA-7	combined radium-226+228	J	BL – Method blank contamination BE – Equipment blank contamination
400-140712-2	3	GWA-3A, GWA-3B, GWA-4, GWA-5, and GWC-2	combined radium-226+228	J	BL – Method blank contamination
400-140902-2	3	GWC-4B	combined radium-226+228	J	BL – Method blank contamination
400-143704-2	4	GWA-1A, GWA-2A, GWA-7, GWA-3B, GWA-4, GWC-2, GWA-5, GWC-6, GWC-4A, GWC-3, and GWC-4B	combined radium-226+228	J	BE – Equipment blank contamination
400-148359-2	5	GWC-1, GWA-3A, GWC-2, GWA-3B, GWA-5, GWC-4B, GWC-7, and GWC-6	combined radium-226+228	J	BL – Method blank contamination BE – Equipment blank contamination
400-148359-2	5	GWC-3	combined radium-226+228	J	BE – Equipment blank contamination
400-151461-2	6	GWA-1A, GWA-2A, GWA-4, GWA-3A, GWA-3B, and GWC-2	combined radium-226+228	J	BF – Field blank contamination

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
400-151461-2	6	GWC-1, GWC-3, GWA-7, GWC-4A, and GWC-6	combined radium-226+228	J	BL – Method blank contamination BF – Field blank contamination BE – Equipment blank contamination
400-160308-2	8	GWA-7A, GWA-3B, and GWC-4A	combined radium-226+228	J	BL – Method blank contamination
400-140902-1	3	GWC-5	TDS	J	H – Holding time exceedance
400-148359-1	5	GWA-1A and GWA-2A	TDS	J	H – Holding time exceedance
400-126512-2	1	GWA-4, GWA-5, GWA-3A, GWC-2, GWC-4A, GWA-1, GWA-2, GWC-4B, and GWC-5	combined radium-226+228	J	L+ – High LCS/LCSD recoveries
400-132918-4	2	GWC-4A and GWC-4B	combined radium-226+228	J (unless previously flagged "U*")	L+ – High LCS/LCSD recoveries
400-140902-2	3	GWC-4A, GWC-3, GWC-4B, GWC-5, and GWC-6	combined radium-226+228	J (unless previously flagged "U*")	L+ – High LCS/LCSD recoveries
400-126512-1	1	GWA-5, GWA-3B, GWC-2, GWC-1, and GWA-1	boron	J	M+ – High MS/MSD recoveries
400-143704-1	4	GWA-1A, GWA-2A, GWA-7, GWA-3B, GWC-1, GWA-4, GWC-2, GWA-5, GWC-6, GWC-3, and GWC-4B	lead	J (unless previously flagged "U*")	M+ – High MS recovery MP – MS/MSD imprecision
400-151461-1	6	GWA-1A, GWA-2A, GWA-4, GWA-3A, GWC-3, GWA-7, GWC-5, GWC-6, and GWC-2	lithium	J (unless previously flagged "U*")	M+ – High MS/MSD recoveries
400-151461-1	6	GWC-1, GWC-3, GWA-7, GWC-5, GWC-4A, GWC-6, and GWC-2	chloride	J/UJ	M- – Low MS/MSD recoveries
400-140712-1	3	GWA-5, GWA-7, GWC-1, and GWC-2	TDS	J	LD – Laboratory duplicate imprecision

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
400-148359-2	5	all samples	combined radium-226+228	J/UJ	LD – Laboratory duplicate imprecision
400-132918-3	2	GWC-4A	TDS	J	FD – Field duplicate imprecision
400-140712-1	3	GWA-2A	selenium	J	FD – Field duplicate imprecision
400-143704-1	4	GWC-1	lead	J (unless previously flagged "U*")	FD – Field duplicate imprecision
400-148359-1	5	GWC-5	TDS	J	FD – Field duplicate imprecision
400-151461-1	6	GWC-1 and GWC-3	TDS	J	FD – Field duplicate imprecision
400-160308-1	8	GWC-2 and GWC-3	TDS	J	FD – Field duplicate imprecision
400-160308-1	8	GWA-7	total chloride, total barium, total calcium, total chromium, total selenium, and TDS	J	FG – Total vs dissolved imprecision
400-160308-1	8	GWA-7 Filtered	dissolved chloride, dissolved barium, dissolved calcium, dissolved chromium, dissolved selenium, and TDS	J	FG – Total vs dissolved imprecision

- All inorganic positive results reported between the method detection limit (MDL) and RL have been flagged "J."
- All radiological results reported below the MDC have been flagged "U."

Report prepared by: Caroline M. Rowshan, Quality Assurance Chemist
 Report reviewed by: Konstadina Vlahogiani, Senior Technical Chemist
 Report reviewed by: Alyssa M. Reed, Senior Quality Assurance Chemist/Project Manager
 Report approved by: David I. Thal, CEAC, CQA, Principal Chemist
 Date: 3/26/2019

INORGANIC AND RADIOLOGICAL DATA QUALIFIERS

- U - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit.
- U* - This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.
- UJ - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.
- J - The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- R - The data are unusable. The sample results are rejected due to serious analytical deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.
- UR - The analyte was analyzed for, but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

Reason Codes and Explanations

Reason Code	Explanation
BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
BN	Negative laboratory blank contamination.
C	Initial and/or continuing calibration issue, indeterminate bias.
C+	Initial and/or continuing calibration issue. The result may be biased high.
C-	Initial and/or continuing calibration issue. The result may be biased low.
FD	Field duplicate imprecision.
FG	Total versus dissolved imprecision.
H	Holding time exceeded.
I	Internal standard recovery outside of acceptance limits.
L	LCS and LCSD recoveries outside of acceptance limits, indeterminate bias.
L+	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased high.
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits, indeterminate bias.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.
MP	MS/MSD imprecision.
P	Post-digestion spike recoveries outside of acceptance limits, indeterminate bias.
P+	Post-digestion spike recovery outside of acceptance limits. The result may be biased high.
P-	Post-digestion spike recovery outside of acceptance limits. The result may be biased low.
Q	Chemical preservation issue.
R	RL standards outside of acceptance limits, indeterminate bias.
R+	RL standard(s) outside of acceptance limits. The result may be biased high.
R-	RL standard(s) outside of acceptance limits. The result may be biased low.
T	Temperature preservation issue.
SD	Serial dilution imprecision.
Y	Chemical yields outside of acceptance limits, indeterminate bias.
Y+	Chemical yield(s) outside of acceptance limits. The result may be biased high.
Y-	Chemical yield(s) outside of acceptance limits. The result may be biased low.
ZZ	Other

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-86243-2

TestAmerica Sample Delivery Group: L3 State Compliance

Client Project/Site: CCR - Plant McIntosh Ash Landfill #3

Revision: 1

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/8/2019 2:25:15 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	13
QC Sample Results	21
QC Association Summary	25
Chain of Custody	28
Receipt Checklists	33

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Job ID: 180-86243-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-86243-2

Revision 2 ; to set RL to those in SOW

Revised: to change RLs for B and Ca to routine

Comments

No additional comments.

Receipt

The samples were received on 1/31/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 2.8° C.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. One out of four COC's does not have a relinquished by time listed.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020: The serial dilution performed for the following sample associated with batch 180-269787 was outside control limits for barium : GWA-3A (180-86243-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

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	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)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Laboratory: TestAmerica Pittsburgh

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
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-86243-1	GWC-1	Water	01/30/19 14:51	01/31/19 10:00
180-86243-2	GWA-1A	Water	01/30/19 13:05	01/31/19 10:00
180-86243-3	GWA-2A	Water	01/30/19 13:20	01/31/19 10:00
180-86243-4	GWA-2B	Water	01/30/19 14:42	01/31/19 10:00
180-86243-5	GWC-3	Water	01/30/19 15:30	01/31/19 10:00
180-86243-6	GWA-3A	Water	01/30/19 13:05	01/31/19 10:00
180-86243-7	GWA-3B	Water	01/30/19 14:55	01/31/19 10:00
180-86243-8	GWA-4	Water	01/30/19 16:10	01/31/19 10:00
180-86243-9	GWC-4A	Water	01/30/19 16:23	01/31/19 10:00
180-86243-10	GWA-5	Water	01/30/19 16:55	01/31/19 10:00
180-86243-11	GWA-7	Water	01/30/19 14:01	01/31/19 10:00
180-86243-12	GWA-7A	Water	01/30/19 13:04	01/31/19 10:00
180-86243-13	DUP-LF3-01	Water	01/30/19 00:00	01/31/19 10:00
180-86243-14	FB-LF3-01	Water	01/30/19 16:20	01/31/19 10:00
180-86243-15	FERB-LF3-01	Water	01/30/19 16:15	01/31/19 10:00

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWC-1
Date Collected: 01/30/19 14:51
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 15:16	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			269787	02/06/19 16:07	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT

Client Sample ID: GWA-1A
Date Collected: 01/30/19 13:05
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 15:32	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			269787	02/06/19 16:10	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT

Client Sample ID: GWA-2A
Date Collected: 01/30/19 13:20
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 15:48	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			269787	02/06/19 16:13	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT

Client Sample ID: GWA-2B
Date Collected: 01/30/19 14:42
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 16:20	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWA-2B

Lab Sample ID: 180-86243-4

Date Collected: 01/30/19 14:42

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:17	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWC-3

Lab Sample ID: 180-86243-5

Date Collected: 01/30/19 15:30

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 16:04	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:20	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWA-3A

Lab Sample ID: 180-86243-6

Date Collected: 01/30/19 13:05

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 17:07	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:30	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWA-3B

Lab Sample ID: 180-86243-7

Date Collected: 01/30/19 14:55

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 17:23	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 12:00	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:43	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWA-4

Date Collected: 01/30/19 16:10

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:10	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:13	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWC-4A

Date Collected: 01/30/19 16:23

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:26	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:28	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-5

Date Collected: 01/30/19 16:55

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:42	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:33	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-7

Date Collected: 01/30/19 14:01

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:58	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWA-7

Date Collected: 01/30/19 14:01

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:38	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWA-7A

Date Collected: 01/30/19 13:04

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 19:45	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:44	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: DUP-LF3-01

Date Collected: 01/30/19 00:00

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 20:01	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:49	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: FB-LF3-01

Date Collected: 01/30/19 16:20

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 14:13	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:54	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-86243-15

Date Collected: 01/30/19 16:15

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 15:00	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:59	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

MJH = Matthew Hartman

RSK = Robert Kurtz

WTR = Bill Reinheimer

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWC-1
Date Collected: 01/30/19 14:51
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-1
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.9		1.0	0.71	mg/L			02/05/19 15:16	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:16	1
Sulfate	0.58	J	1.0	0.38	mg/L			02/05/19 15:16	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.018		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:07	1
Beryllium	0.000090	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:07	1
Cobalt	0.00023	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:07	1
Chromium	0.0024	J B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:07	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:07	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:07	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:07	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:07	1
Calcium	0.24	J	0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:07	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-1A
Date Collected: 01/30/19 13:05
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-2
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.2		1.0	0.71	mg/L			02/05/19 15:32	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:32	1
Sulfate	1.2		1.0	0.38	mg/L			02/05/19 15:32	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.024		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:10	1
Beryllium	0.00026	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:10	1
Cobalt	0.00038	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:10	1
Chromium	0.0061	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:10	1
Lead	0.00021	J	0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:10	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:10	1
Vanadium	0.0017	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:10	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:10	1
Calcium	1.9		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:10	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	82		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWA-2A

Lab Sample ID: 180-86243-3

Date Collected: 01/30/19 13:20

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.71	mg/L			02/05/19 15:48	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:48	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 15:48	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.042		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:13	1
Beryllium	0.00037	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:13	1
Cobalt	0.00050	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:13	1
Chromium	0.0023	J B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:13	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:13	1
Copper	0.0018	J	0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:13	1
Vanadium	0.0019	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:13	1
Zinc	0.0051	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:13	1
Calcium	3.5		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:13	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	68		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-2B

Lab Sample ID: 180-86243-4

Date Collected: 01/30/19 14:42

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.3		1.0	0.71	mg/L			02/05/19 16:20	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 16:20	1
Sulfate	74		1.0	0.38	mg/L			02/05/19 16:20	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.041		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:17	1
Beryllium	0.0019	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:17	1
Cobalt	0.0044		0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:17	1
Chromium	0.0030	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:17	1
Lead	0.00028	J	0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:17	1
Copper	0.0035		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:17	1
Vanadium	0.0018	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:17	1
Zinc	0.013	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:17	1
Calcium	16		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:17	1
Boron	0.77		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWC-3

Date Collected: 01/30/19 15:30

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-5

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.71	mg/L			02/05/19 16:04	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 16:04	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 16:04	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.037		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:20	1
Beryllium	0.00033	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:20	1
Cobalt	0.00051	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:20	1
Chromium	0.0047	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:20	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:20	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:20	1
Vanadium	0.0017	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:20	1
Zinc	0.0033	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:20	1
Calcium	2.0		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:20	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	33		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-3A

Date Collected: 01/30/19 13:05

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-6

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			02/05/19 17:07	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 17:07	1
Sulfate	0.41	J	1.0	0.38	mg/L			02/05/19 17:07	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.071		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:30	1
Beryllium	0.00051	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:30	1
Cobalt	0.0014	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:30	1
Chromium	0.0050	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:30	1
Lead	0.00034	J	0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:30	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:30	1
Vanadium	0.0016	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:30	1
Zinc	0.0058	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:30	1
Calcium	2.4		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:30	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	41		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWA-3B

Lab Sample ID: 180-86243-7

Date Collected: 01/30/19 14:55

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.8		1.0	0.71	mg/L			02/05/19 17:23	1
Fluoride	0.052	J	0.20	0.026	mg/L			02/05/19 17:23	1
Sulfate	7.2		1.0	0.38	mg/L			02/05/19 17:23	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.053		0.0025	0.00037	mg/L		02/05/19 12:00	02/06/19 16:43	1
Beryllium	0.00030	J	0.0025	0.000057	mg/L		02/05/19 12:00	02/06/19 16:43	1
Cobalt	0.0019	J	0.0025	0.000075	mg/L		02/05/19 12:00	02/06/19 16:43	1
Chromium	0.0070	B	0.0025	0.00063	mg/L		02/05/19 12:00	02/06/19 16:43	1
Lead	0.0010		0.0010	0.000094	mg/L		02/05/19 12:00	02/06/19 16:43	1
Copper	0.0015	J	0.0025	0.0013	mg/L		02/05/19 12:00	02/06/19 16:43	1
Vanadium	0.0043	B	0.0025	0.00090	mg/L		02/05/19 12:00	02/06/19 16:43	1
Zinc	0.0041	J	0.020	0.0024	mg/L		02/05/19 12:00	02/06/19 16:43	1
Calcium	3.6		0.25	0.12	mg/L		02/05/19 12:00	02/06/19 16:43	1
Boron	0.041	J	0.050	0.030	mg/L		02/05/19 12:00	02/06/19 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	53		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-4

Lab Sample ID: 180-86243-8

Date Collected: 01/30/19 16:10

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.0	0.71	mg/L			02/05/19 18:10	1
Fluoride	0.029	J	0.20	0.026	mg/L			02/05/19 18:10	1
Sulfate	3.5		1.0	0.38	mg/L			02/05/19 18:10	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.040		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:13	1
Beryllium	0.00019	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:13	1
Cobalt	0.00092	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:13	1
Chromium	0.00088	J	0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:13	1
Lead	0.00013	J	0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:13	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:13	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:13	1
Zinc	0.0060	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:13	1
Calcium	1.0		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:13	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWC-4A

Lab Sample ID: 180-86243-9

Date Collected: 01/30/19 16:23

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.71	mg/L			02/05/19 18:26	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 18:26	1
Sulfate	0.90	J	1.0	0.38	mg/L			02/05/19 18:26	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.027		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:28	1
Beryllium	0.000070	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:28	1
Cobalt	0.00038	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:28	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:28	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:28	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:28	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:28	1
Zinc	0.0042	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:28	1
Calcium	0.34		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:28	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	37		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-5

Lab Sample ID: 180-86243-10

Date Collected: 01/30/19 16:55

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.71	mg/L			02/05/19 18:42	1
Fluoride	0.089	J	0.20	0.026	mg/L			02/05/19 18:42	1
Sulfate	15		1.0	0.38	mg/L			02/05/19 18:42	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.079		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:33	1
Beryllium	0.00024	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:33	1
Cobalt	0.00076	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:33	1
Chromium	0.0014	J	0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:33	1
Lead	0.00064	J	0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:33	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:33	1
Vanadium	0.0019	J	0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:33	1
Zinc	0.0057	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:33	1
Calcium	1.7		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:33	1
Boron	0.030	J	0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	67		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWA-7

Date Collected: 01/30/19 14:01

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-11

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.71	mg/L			02/05/19 18:58	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 18:58	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 18:58	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.036		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:38	1
Beryllium	0.00047	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:38	1
Cobalt	0.0012	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:38	1
Chromium	0.010		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:38	1
Lead	0.0021		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:38	1
Copper	0.0016	J	0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:38	1
Vanadium	0.0043		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:38	1
Zinc	0.014	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:38	1
Calcium	2.0		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:38	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			02/02/19 08:18	1

Client Sample ID: GWA-7A

Date Collected: 01/30/19 13:04

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-12

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.1		1.0	0.71	mg/L			02/05/19 19:45	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 19:45	1
Sulfate	85		1.0	0.38	mg/L			02/05/19 19:45	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.10		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:44	1
Beryllium	0.00047	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:44	1
Cobalt	0.0047		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:44	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:44	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:44	1
Copper	0.0018	J	0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:44	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:44	1
Zinc	0.011	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:44	1
Calcium	15		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:44	1
Boron	1.5		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: DUP-LF3-01

Lab Sample ID: 180-86243-13

Date Collected: 01/30/19 00:00

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.8		1.0	0.71	mg/L			02/05/19 20:01	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 20:01	1
Sulfate	0.74	J	1.0	0.38	mg/L			02/05/19 20:01	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.013		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:49	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:49	1
Cobalt	0.00013	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:49	1
Chromium	0.00092	J	0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:49	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:49	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:49	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:49	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:49	1
Calcium	0.21	J	0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:49	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		10	10	mg/L			02/02/19 08:18	1

Client Sample ID: FB-LF3-01

Lab Sample ID: 180-86243-14

Date Collected: 01/30/19 16:20

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 14:13	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 14:13	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 14:13	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:54	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:54	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:54	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:54	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:54	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:54	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:54	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:54	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:54	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/02/19 08:18	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-86243-15

Date Collected: 01/30/19 16:15

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 15:00	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:00	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 15:00	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:59	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:59	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:59	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:59	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:59	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:59	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:59	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:59	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:59	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/02/19 08:18	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-269535/38
Matrix: Water
Analysis Batch: 269535

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 13:57	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 13:57	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 13:57	1

Lab Sample ID: MB 180-269535/6
Matrix: Water
Analysis Batch: 269535

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 05:31	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 05:31	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 05:31	1

Lab Sample ID: LCS 180-269535/37
Matrix: Water
Analysis Batch: 269535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.2		mg/L		97	90 - 110
Fluoride	1.25	1.23		mg/L		98	90 - 110
Sulfate	25.0	23.8		mg/L		95	90 - 110

Lab Sample ID: 180-86243-5 MS
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10		25.0	36.6		mg/L		107	80 - 120
Fluoride	<0.026		1.25	1.38		mg/L		110	80 - 120
Sulfate	<0.38		25.0	26.8		mg/L		107	80 - 120

Lab Sample ID: 180-86243-5 MSD
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWC-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	10		25.0	36.4		mg/L		106	80 - 120	1	20
Fluoride	<0.026		1.25	1.37		mg/L		110	80 - 120	0	20
Sulfate	<0.38		25.0	26.8		mg/L		107	80 - 120	0	20

Lab Sample ID: 180-86243-11 MS
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWA-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.5		25.0	31.6		mg/L		100	80 - 120
Fluoride	<0.026		1.25	1.31		mg/L		105	80 - 120
Sulfate	<0.38		25.0	25.2		mg/L		101	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-86243-11 MSD
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWA-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.5		25.0	33.0		mg/L		106	80 - 120	4	20
Fluoride	<0.026		1.25	1.36		mg/L		109	80 - 120	4	20
Sulfate	<0.38		25.0	26.6		mg/L		106	80 - 120	5	20

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-269611/1-A
Matrix: Water
Analysis Batch: 269787

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 14:50	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 14:50	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 14:50	1
Chromium	0.00117	J	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 14:50	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 14:50	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 14:50	1
Vanadium	0.000971	J	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 14:50	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 14:50	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 14:50	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 14:50	1

Lab Sample ID: LCS 180-269611/2-A
Matrix: Water
Analysis Batch: 269787

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2.00	2.17		mg/L		109	80 - 120
Beryllium	0.0500	0.0517		mg/L		103	80 - 120
Cobalt	0.500	0.496		mg/L		99	80 - 120
Chromium	0.200	0.212		mg/L		106	80 - 120
Lead	0.0200	0.0213		mg/L		107	80 - 120
Copper	0.250	0.254		mg/L		102	80 - 120
Vanadium	0.500	0.526		mg/L		105	80 - 120
Zinc	0.500	0.498		mg/L		100	80 - 120
Calcium	50.0	53.8		mg/L		108	80 - 120
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 180-86243-B-6-B MS
Matrix: Water
Analysis Batch: 269787

Client Sample ID: 180-86243-B-6-B MS
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0527		2.00	2.14		mg/L		104	75 - 125
Beryllium	0.000299		0.0500	0.0493		mg/L		98	75 - 125
Cobalt	0.00192		0.500	0.458		mg/L		91	75 - 125
Chromium	0.00702		0.200	0.206		mg/L		99	75 - 125
Lead	0.00103		0.0200	0.0211		mg/L		100	75 - 125

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-86243-B-6-B MS
Matrix: Water
Analysis Batch: 269787

Client Sample ID: 180-86243-B-6-B MS
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	0.00150		0.250	0.241		mg/L		96	75 - 125
Vanadium	0.00432		0.500	0.498		mg/L		99	75 - 125
Zinc	0.00405		0.500	0.473		mg/L		94	75 - 125
Calcium	3.62		50.0	53.1		mg/L		99	75 - 125
Boron	0.0409		1.00	1.02		mg/L		98	75 - 125

Lab Sample ID: 180-86243-B-6-C MSD
Matrix: Water
Analysis Batch: 269787

Client Sample ID: 180-86243-B-6-C MSD
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	0.0527		2.00	2.12		mg/L		103	75 - 125	1	20
Beryllium	0.000299		0.0500	0.0491		mg/L		98	75 - 125	0	20
Cobalt	0.00192		0.500	0.460		mg/L		92	75 - 125	0	20
Chromium	0.00702		0.200	0.204		mg/L		99	75 - 125	1	20
Lead	0.00103		0.0200	0.0208		mg/L		99	75 - 125	1	20
Copper	0.00150		0.250	0.238		mg/L		95	75 - 125	1	20
Vanadium	0.00432		0.500	0.495		mg/L		98	75 - 125	0	20
Zinc	0.00405		0.500	0.465		mg/L		92	75 - 125	2	20
Calcium	3.62		50.0	53.3		mg/L		99	75 - 125	0	20
Boron	0.0409		1.00	1.01		mg/L		97	75 - 125	0	20

Lab Sample ID: MB 180-269612/1-A
Matrix: Water
Analysis Batch: 270330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 269612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 15:27	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 15:27	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 15:27	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 15:27	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 15:27	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 15:27	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 15:27	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 15:27	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 15:27	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 15:27	1

Lab Sample ID: LCS 180-269612/2-A
Matrix: Water
Analysis Batch: 270330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2.00	1.80		mg/L		90	80 - 120
Beryllium	0.0500	0.0524		mg/L		105	80 - 120
Cobalt	0.500	0.462		mg/L		92	80 - 120
Chromium	0.200	0.180		mg/L		90	80 - 120
Lead	0.0200	0.0196		mg/L		98	80 - 120
Copper	0.250	0.252		mg/L		101	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-269612/2-A
 Matrix: Water
 Analysis Batch: 270330

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 269612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.500	0.468		mg/L		94	80 - 120
Zinc	0.500	0.509		mg/L		102	80 - 120
Calcium	50.0	48.8		mg/L		98	80 - 120
Boron	1.00	0.871		mg/L		87	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-269416/2
 Matrix: Water
 Analysis Batch: 269416

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	<10		10	10	mg/L			02/02/19 08:18	1

Lab Sample ID: LCS 180-269416/1
 Matrix: Water
 Analysis Batch: 269416

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	204	218		mg/L		107	80 - 120

Lab Sample ID: MB 180-269417/2
 Matrix: Water
 Analysis Batch: 269417

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	<10		10	10	mg/L			02/02/19 08:25	1

Lab Sample ID: LCS 180-269417/1
 Matrix: Water
 Analysis Batch: 269417

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	204	238		mg/L		117	80 - 120

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

HPLC/IC

Analysis Batch: 269535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total/NA	Water	EPA 300.0 R2.1	
180-86243-2	GWA-1A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-3	GWA-2A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-4	GWA-2B	Total/NA	Water	EPA 300.0 R2.1	
180-86243-5	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-86243-6	GWA-3A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-7	GWA-3B	Total/NA	Water	EPA 300.0 R2.1	
180-86243-8	GWA-4	Total/NA	Water	EPA 300.0 R2.1	
180-86243-9	GWC-4A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-10	GWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-86243-11	GWA-7	Total/NA	Water	EPA 300.0 R2.1	
180-86243-12	GWA-7A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-13	DUP-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-86243-14	FB-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-86243-15	FERB-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
MB 180-269535/38	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-269535/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-269535/37	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-86243-5 MS	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-86243-5 MSD	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-86243-11 MS	GWA-7	Total/NA	Water	EPA 300.0 R2.1	
180-86243-11 MSD	GWA-7	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 269611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total Recoverable	Water	3005A	
180-86243-2	GWA-1A	Total Recoverable	Water	3005A	
180-86243-3	GWA-2A	Total Recoverable	Water	3005A	
180-86243-4	GWA-2B	Total Recoverable	Water	3005A	
180-86243-5	GWC-3	Total Recoverable	Water	3005A	
180-86243-6	GWA-3A	Total Recoverable	Water	3005A	
180-86243-7	GWA-3B	Total Recoverable	Water	3005A	
MB 180-269611/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-269611/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-86243-B-6-B MS	180-86243-B-6-B MS	Total Recoverable	Water	3005A	
180-86243-B-6-C MSD	180-86243-B-6-C MSD	Total Recoverable	Water	3005A	

Prep Batch: 269612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-8	GWA-4	Total Recoverable	Water	3005A	
180-86243-9	GWC-4A	Total Recoverable	Water	3005A	
180-86243-10	GWA-5	Total Recoverable	Water	3005A	
180-86243-11	GWA-7	Total Recoverable	Water	3005A	
180-86243-12	GWA-7A	Total Recoverable	Water	3005A	
180-86243-13	DUP-LF3-01	Total Recoverable	Water	3005A	
180-86243-14	FB-LF3-01	Total Recoverable	Water	3005A	
180-86243-15	FERB-LF3-01	Total Recoverable	Water	3005A	
MB 180-269612/1-A	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Pittsburgh

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Metals (Continued)

Prep Batch: 269612 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-269612/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 269787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total Recoverable	Water	EPA 6020	269611
180-86243-2	GWA-1A	Total Recoverable	Water	EPA 6020	269611
180-86243-3	GWA-2A	Total Recoverable	Water	EPA 6020	269611
180-86243-4	GWA-2B	Total Recoverable	Water	EPA 6020	269611
180-86243-5	GWC-3	Total Recoverable	Water	EPA 6020	269611
180-86243-6	GWA-3A	Total Recoverable	Water	EPA 6020	269611
180-86243-7	GWA-3B	Total Recoverable	Water	EPA 6020	269611
MB 180-269611/1-A	Method Blank	Total Recoverable	Water	EPA 6020	269611
LCS 180-269611/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	269611
180-86243-B-6-B MS	180-86243-B-6-B MS	Total Recoverable	Water	EPA 6020	269611
180-86243-B-6-C MSD	180-86243-B-6-C MSD	Total Recoverable	Water	EPA 6020	269611

Analysis Batch: 270330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-8	GWA-4	Total Recoverable	Water	EPA 6020	269612
180-86243-9	GWC-4A	Total Recoverable	Water	EPA 6020	269612
180-86243-10	GWA-5	Total Recoverable	Water	EPA 6020	269612
180-86243-11	GWA-7	Total Recoverable	Water	EPA 6020	269612
180-86243-12	GWA-7A	Total Recoverable	Water	EPA 6020	269612
180-86243-13	DUP-LF3-01	Total Recoverable	Water	EPA 6020	269612
180-86243-14	FB-LF3-01	Total Recoverable	Water	EPA 6020	269612
180-86243-15	FERB-LF3-01	Total Recoverable	Water	EPA 6020	269612
MB 180-269612/1-A	Method Blank	Total Recoverable	Water	EPA 6020	269612
LCS 180-269612/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	269612

General Chemistry

Analysis Batch: 269416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-11	GWA-7	Total/NA	Water	SM 2540C	
180-86243-13	DUP-LF3-01	Total/NA	Water	SM 2540C	
180-86243-14	FB-LF3-01	Total/NA	Water	SM 2540C	
180-86243-15	FERB-LF3-01	Total/NA	Water	SM 2540C	
MB 180-269416/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-269416/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 269417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total/NA	Water	SM 2540C	
180-86243-2	GWA-1A	Total/NA	Water	SM 2540C	
180-86243-3	GWA-2A	Total/NA	Water	SM 2540C	
180-86243-4	GWA-2B	Total/NA	Water	SM 2540C	
180-86243-5	GWC-3	Total/NA	Water	SM 2540C	
180-86243-6	GWA-3A	Total/NA	Water	SM 2540C	
180-86243-7	GWA-3B	Total/NA	Water	SM 2540C	
180-86243-8	GWA-4	Total/NA	Water	SM 2540C	

TestAmerica Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

General Chemistry (Continued)

Analysis Batch: 269417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-9	GWC-4A	Total/NA	Water	SM 2540C	
180-86243-10	GWA-5	Total/NA	Water	SM 2540C	
180-86243-12	GWA-7A	Total/NA	Water	SM 2540C	
MB 180-269417/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-269417/1	Lab Control Sample	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Chain of Custody Record

Client Information Client Contact: Peter A. Jake A, Lauren C, Johnnie N Phone: 4045920096 E-Mail: veronica.bortot@testamericainc.com		Lab PM: Bortot, Veronica Carrier Tracking No(s):	
Company: Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: [blank] Email: labraham@southernco.com, lmpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: [blank]		Analysis Requested TDS, 300_ORGFM, 280 chloride, Fluoride, Sulfate 6020 - Ba, Be, Cr, Co, Cu, Pb, Va, Zn Perform MS/MSD (Yes or No)	
Due Date Requested: [blank] TAT Requested (days): Standard		Total Number of Containers: 2	
PO #: SCS10347656 WO #: [blank] Project #: 18019950 SSOV#: [blank]		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Z - other (specify)	
Sample Identification GWC-1 GWA-1A GWA-2A GWA-2B GWC-3 GWA-3A GWA-3B GWA-4 GWA-4A GWA-5		Special Instructions/Note: State Compliance Event	
Sample Date: 1/30/19 Sample Time: 1:51 Sample Type (C=Comp, G=grab): G Preservation Code: Water		Field Filtered Sample (Yes or No): N Sample Disposal (A fee may be assessed if samples are retained long): [blank]	
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 long) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For	
Empty Kit Relinquished by: [blank] Relinquished by: PEKY A Relinquished by: [blank] Relinquished by: [blank]		Method of Shipment: FedEx Date/Time: 1-31-19 Date/Time: 7:00 Date/Time: [blank]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: [blank]		Cooler Temperature(s) °C and Other Remarks: [blank]	



Chain of Custody Record

Client Information		Sampler: Peter A. Jake A. Lauren C. Johnnie N		Lab PM: Bortol, Veronica		Carrier Tracking No(s)		COC No	
Client Contact: Joju Abraham		Phone: 4045920096		E-Mail: veronica.bortol@testamericainc.com		Analysis Requested		Page: 2 of 2 Job #:	
Company: Southern Company		Address: 241 Ralph McGill Blvd SE		City: Atlanta		State, Zip: GA, 30308		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDTA Z - other (specify) Other:	
PO #: SCS10347656		WO #: 18019950		Project #: 18019950		SSOW#:		Special Instructions/Note:	
Due Date Requested:		TAT Requested (days):		Standard		6020 - Bo. Ca		Total Number of Containers	
Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Preservation Code		Field Filtered Sample (Yes or No)	
GWA-7		14:01		G		Water		N	
GWA-7A		13:04		↓		↓		N	
DUP-LFB-01		16:20		↓		↓		N	
FB-LFB-01		↓		↓		↓		N	
FERB-LFB-01		16:15		↓		↓		N	
Possible Hazard Identification		Poison B		Unknown		Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input checked="" type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Other (specify)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date:		Method of Shipment: FedEx		Special Instructions/QC Requirements:	
Relinquished by: Peter A		Date/Time: 1/30/19 19:00		Company: GET		Received by: Debra Wabon		Date/Time: 1-31-19	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: 10:00	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact Δ Yes Δ No		Custody Seal No.:		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 City: Atlanta State, Zip: GA, 30308 Phone: [blank] Email: jlebraham@southernco.com, lmpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: [blank]		Sampler: Peter A. Jake A. Lauren C. Johnnie N Lab PM: Bortol, Veronica Phone: 4045920096 E-Mail: veronica.bortol@testamericainc.com		Carrier Tracking No(s): [blank]	
Due Date Requested: [blank] TAT Requested (days): Standard		Analysis Requested			
PO # SCS10347656 WO # [blank]		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: [blank]			
Sample Identification GWA-7 GWA-7A DUP-LF3-01 FB-LF3-01 FERB-LF3-01		Sample Date 1/30/19 ↓ ↓ ↓		Sample Time 14:01 ↓ ↓ ↓ ↓	
Sample Type (C=comp, G=grab) G		Preservation Code Water		Matrix (W=water, S=solid, O=wast/oil, B1=Tissue, A=air)	
Field Filtered Sample (Yes or No) N		Perform MS/MSD (Yes or No) N		Total Number of Containers 2	
Special Instructions/Note: State Compliance Event		Special Instructions/Note: State Compliance Event			
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 type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements:					
Empty Kit Relinquished by: [blank]		Date: [blank]		Method of Shipment: FedEx	
Relinquished by: Peter A		Date/Time: 1/30/19		Received by: Debbie Watson Date/Time: 1-31-19	
Relinquished by: [blank]		Date/Time: [blank]		Received by: [blank] Date/Time: 10:00	
Relinquished by: [blank]		Date/Time: [blank]		Received by: [blank] Date/Time: [blank]	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.: [blank]		Cooler Temperature(s) °C and Other Remarks: [blank]	



ORIGIN ID: SAVA
VERONICA BORTOT (412) 963-7058
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 30 JAN 1
ACTWGT: 49.10 LB
CAD: 006994919/SSFE1822
DIMS: 24x13x13 IN
BILL THIRD PARTY

0 VERONICA BORTOT

301 ALPHA DR
301 ALPHA DR
PITTSBURGH PA 15238
REF: (2) 963-7058

180-86243 Waybill



2 of 2
7852 3335 8113
Mstr #

THU - 31 JAN 10:30A
PRIORITY OVERNIGHT

AGCA

Uncorrected temp
Thermometer ID
Initials AB
1/8/18

15238
PA-US
PIT



ORIGIN ID: SAVA
VERONICA BORTOT (412) 963-7058

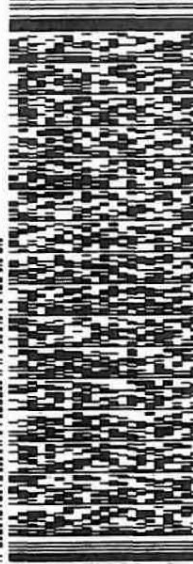
SHIP DATE: 30 JAN 19
ACTWGT: 53.40 LB
CAD: 006994919/SSFE1822
DIMS: 24x13x13 IN
BILL THIRD PARTY

301 ALPHA DR
301 ALPHA DR
PITTSBURGH PA 15238
UNITED STATES US

0 VERONICA BORTOT

301 ALPHA DR
301 ALPHA DR
PITTSBURGH PA 15238
REF: (412) 963-7058

180-86243 Waybill



2 of 2
MPS# 7852 3335 8124
0263
Mstr# 7852 3335 8113
0201

THU - 31 JAN 10:30A
PRIORITY OVERNIGHT

XH AGCA

15238
PA-US
PIT

Uncorrected temp
Thermometer ID
CF U Initials AB
1/8/18



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-86243-2
SDG Number: L3 State Compliance

Login Number: 86243
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

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	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
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.	N/A	



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-86297-2

TestAmerica Sample Delivery Group: L3 State Compliance

Client Project/Site: CCR - Plant McIntosh Ash Landfill #3

Revision: 2

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/8/2019 2:34:15 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	10
QC Sample Results	13
QC Association Summary	15
Chain of Custody	17
Receipt Checklists	20

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Job ID: 180-86297-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-86297-2

Revision 2 ; to set RL to those in SOW

Revised: to change RLs for B and Ca to routine

Comments

No additional comments.

Receipt

The samples were received on 2/1/2019 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

Anions

Samples 3,5 and 6 were reanalyzed as initial results did not matching historical results; The reanalysis confirmed that the samples were switched when at the instrument for analysis. These samples were reanalyzed on 2/22/19 . Ony the results obtained from the reanalysis for these three samples are being reported.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

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	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)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Laboratory: TestAmerica Pittsburgh

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
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-86297-1	FB-LF3-02	Water	01/31/19 08:30	02/01/19 15:55
180-86297-2	FERB-LF3-02	Water	01/31/19 08:35	02/01/19 15:55
180-86297-3	GWC-5	Water	01/31/19 10:00	02/01/19 15:55
180-86297-4	GWC-6	Water	01/31/19 10:15	02/01/19 15:55
180-86297-5	GWC-2	Water	01/31/19 10:05	02/01/19 15:55
180-86297-6	DUP-LF3-02	Water	01/31/19 00:00	02/01/19 15:55

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Client Sample ID: FB-LF3-02

Date Collected: 01/31/19 08:30

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			269666	02/06/19 06:22	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			270177	02/12/19 10:15	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT

Client Sample ID: FERB-LF3-02

Date Collected: 01/31/19 08:35

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			269666	02/06/19 06:38	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			270177	02/12/19 10:18	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT

Client Sample ID: GWC-5

Date Collected: 01/31/19 10:00

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1	1 mL	1.0 mL	271124	02/22/19 13:23	JBF	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			270177	02/12/19 10:21	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT

Client Sample ID: GWC-6

Date Collected: 01/31/19 10:15

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			269666	02/06/19 07:09	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Client Sample ID: GWC-6

Date Collected: 01/31/19 10:15

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	EPA 6020		1			270177	02/12/19 10:25	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: GWC-2

Date Collected: 01/31/19 10:05

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			271124	02/22/19 13:39	JBF	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			270177	02/12/19 10:28	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-LF3-02

Date Collected: 01/31/19 00:00

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			271124	02/22/19 13:54	JBF	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			270177	02/12/19 10:31	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

JBF = Joshua Fritsch

MJH = Matthew Hartman

RSK = Robert Kurtz

TAM = Tessa Mastalski

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Client Sample ID: FB-LF3-02

Lab Sample ID: 180-86297-1

Date Collected: 01/31/19 08:30

Matrix: Water

Date Received: 02/01/19 15:55

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/06/19 06:22	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 06:22	1
Sulfate	<0.38		1.0	0.38	mg/L			02/06/19 06:22	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:15	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:15	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:15	1
Chromium	0.0013	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:15	1
Lead	0.00012	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:15	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:15	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:15	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:15	1
Calcium	0.15	J	0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:15	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/05/19 12:04	1

Client Sample ID: FERB-LF3-02

Lab Sample ID: 180-86297-2

Date Collected: 01/31/19 08:35

Matrix: Water

Date Received: 02/01/19 15:55

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/06/19 06:38	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 06:38	1
Sulfate	<0.38		1.0	0.38	mg/L			02/06/19 06:38	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:18	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:18	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:18	1
Chromium	0.0014	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:18	1
Lead	0.00012	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:18	1
Vanadium	0.00091	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:18	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:18	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:18	1
Calcium	0.16	J	0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:18	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/05/19 12:04	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Client Sample ID: GWC-5
Date Collected: 01/31/19 10:00
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-3
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0		1.0	0.71	mg/L			02/22/19 13:23	1
Fluoride	0.063	J	0.20	0.026	mg/L			02/22/19 13:23	1
Sulfate	4.8		1.0	0.38	mg/L			02/22/19 13:23	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.45		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:21	1
Beryllium	0.0012	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:21	1
Cobalt	0.013		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:21	1
Chromium	0.0019	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:21	1
Lead	0.00024	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:21	1
Vanadium	0.0016	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:21	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:21	1
Zinc	0.033	B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:21	1
Calcium	7.5		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:21	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		10	10	mg/L			02/05/19 12:04	1

Client Sample ID: GWC-6
Date Collected: 01/31/19 10:15
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-4
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.5		1.0	0.71	mg/L			02/06/19 07:09	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 07:09	1
Sulfate	0.86	J	1.0	0.38	mg/L			02/06/19 07:09	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.053		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:25	1
Beryllium	0.00012	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:25	1
Cobalt	0.00076	J	0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:25	1
Chromium	0.0021	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:25	1
Lead	0.00050	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:25	1
Vanadium	0.0019	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:25	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:25	1
Zinc	0.0062	J B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:25	1
Calcium	1.9		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:25	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		10	10	mg/L			02/05/19 12:04	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Client Sample ID: GWC-2
Date Collected: 01/31/19 10:05
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-5
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.2		1.0	0.71	mg/L			02/22/19 13:39	1
Fluoride	<0.026		0.20	0.026	mg/L			02/22/19 13:39	1
Sulfate	0.57	J	1.0	0.38	mg/L			02/22/19 13:39	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.067		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:28	1
Beryllium	0.000065	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:28	1
Cobalt	0.00092	J	0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:28	1
Chromium	0.0061		0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:28	1
Lead	0.00015	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:28	1
Vanadium	0.0010	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:28	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:28	1
Zinc	0.0068	J B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:28	1
Calcium	4.8		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:28	1
Boron	0.040	J	0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	45		10	10	mg/L			02/05/19 12:04	1

Client Sample ID: DUP-LF3-02
Date Collected: 01/31/19 00:00
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-6
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.2		1.0	0.71	mg/L			02/22/19 13:54	1
Fluoride	0.026	J	0.20	0.026	mg/L			02/22/19 13:54	1
Sulfate	0.48	J	1.0	0.38	mg/L			02/22/19 13:54	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.067		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:31	1
Beryllium	0.000087	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:31	1
Cobalt	0.00088	J	0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:31	1
Chromium	0.0057		0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:31	1
Lead	0.00012	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:31	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:31	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:31	1
Zinc	0.0065	J B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:31	1
Calcium	4.5		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:31	1
Boron	0.038	J	0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	45		10	10	mg/L			02/05/19 12:04	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-269666/6
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/06/19 05:30	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 05:30	1
Sulfate	<0.38		1.0	0.38	mg/L			02/06/19 05:30	1

Lab Sample ID: LCS 180-269666/5
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.4		mg/L		97	90 - 110
Fluoride	1.25	1.23		mg/L		98	90 - 110
Sulfate	25.0	24.0		mg/L		96	90 - 110

Lab Sample ID: 180-86297-A-5 MS
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.8		25.0	31.7		mg/L		96	80 - 120
Fluoride	0.11	J	1.25	1.33		mg/L		98	80 - 120
Sulfate	4.1		25.0	26.0		mg/L		88	80 - 120

Lab Sample ID: 180-86297-A-5 MSD
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	7.8		25.0	31.6		mg/L		95	80 - 120	0	20
Fluoride	0.11	J	1.25	1.34		mg/L		99	80 - 120	1	20
Sulfate	4.1		25.0	26.1		mg/L		88	80 - 120	0	20

Lab Sample ID: MB 180-271124/6
Matrix: Water
Analysis Batch: 271124

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/22/19 09:43	1
Fluoride	<0.026		0.20	0.026	mg/L			02/22/19 09:43	1
Sulfate	<0.38		1.0	0.38	mg/L			02/22/19 09:43	1

Lab Sample ID: LCS 180-271124/5
Matrix: Water
Analysis Batch: 271124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.6		mg/L		98	90 - 110
Fluoride	1.25	1.32		mg/L		106	90 - 110
Sulfate	25.0	24.4		mg/L		97	90 - 110

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-269614/1-A
Matrix: Water
Analysis Batch: 270177

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 269614

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 09:34	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 09:34	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 09:34	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 09:34	1
Lead	0.000279	J	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 09:34	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 09:34	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 09:34	1
Zinc	0.00397	J	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 09:34	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 09:34	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 09:34	1

Lab Sample ID: LCS 180-269614/2-A
Matrix: Water
Analysis Batch: 270177

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269614

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2.00	1.91		mg/L		96	80 - 120
Beryllium	0.0500	0.0496		mg/L		99	80 - 120
Cobalt	0.500	0.497		mg/L		99	80 - 120
Chromium	0.200	0.199		mg/L		100	80 - 120
Lead	0.0200	0.0194		mg/L		97	80 - 120
Vanadium	0.500	0.486		mg/L		97	80 - 120
Copper	0.250	0.258		mg/L		103	80 - 120
Zinc	0.500	0.497		mg/L		99	80 - 120
Calcium	50.0	49.7		mg/L		99	80 - 120
Boron	1.00	0.915		mg/L		91	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-269613/2
Matrix: Water
Analysis Batch: 269613

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	<10		10	10	mg/L			02/05/19 12:04	1

Lab Sample ID: LCS 180-269613/1
Matrix: Water
Analysis Batch: 269613

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	204	210		mg/L		103	80 - 120

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

HPLC/IC

Analysis Batch: 269666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
180-86297-2	FERB-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
180-86297-4	GWC-6	Total/NA	Water	EPA 300.0 R2.1	
MB 180-269666/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-269666/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-86297-A-5 MS	Matrix Spike	Total/NA	Water	EPA 300.0 R2.1	
180-86297-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 271124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-3	GWC-5	Total/NA	Water	EPA 300.0 R2.1	
180-86297-5	GWC-2	Total/NA	Water	EPA 300.0 R2.1	
180-86297-6	DUP-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
MB 180-271124/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-271124/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 269614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total Recoverable	Water	3005A	
180-86297-2	FERB-LF3-02	Total Recoverable	Water	3005A	
180-86297-3	GWC-5	Total Recoverable	Water	3005A	
180-86297-4	GWC-6	Total Recoverable	Water	3005A	
180-86297-5	GWC-2	Total Recoverable	Water	3005A	
180-86297-6	DUP-LF3-02	Total Recoverable	Water	3005A	
MB 180-269614/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-269614/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 270177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total Recoverable	Water	EPA 6020	269614
180-86297-2	FERB-LF3-02	Total Recoverable	Water	EPA 6020	269614
180-86297-3	GWC-5	Total Recoverable	Water	EPA 6020	269614
180-86297-4	GWC-6	Total Recoverable	Water	EPA 6020	269614
180-86297-5	GWC-2	Total Recoverable	Water	EPA 6020	269614
180-86297-6	DUP-LF3-02	Total Recoverable	Water	EPA 6020	269614
MB 180-269614/1-A	Method Blank	Total Recoverable	Water	EPA 6020	269614
LCS 180-269614/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	269614

General Chemistry

Analysis Batch: 269613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total/NA	Water	SM 2540C	
180-86297-2	FERB-LF3-02	Total/NA	Water	SM 2540C	
180-86297-3	GWC-5	Total/NA	Water	SM 2540C	
180-86297-4	GWC-6	Total/NA	Water	SM 2540C	
180-86297-5	GWC-2	Total/NA	Water	SM 2540C	
180-86297-6	DUP-LF3-02	Total/NA	Water	SM 2540C	

TestAmerica Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

General Chemistry (Continued)

Analysis Batch: 269613 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-269613/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-269613/1	Lab Control Sample	Total/NA	Water	SM 2540C	

1

2

3

4

5

6

7

8

9

10

11

12

13

Chain of Custody Record

Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: _____ Email: jlabraham@southernco.com, jimpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: _____		Sampler: Peter A. Jake A., Lauren C., Johnnie N Lab PM: Bortot, Veronica Phone: 4045920096 E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): _____	
Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10347656 WO #: _____ Project #: 18019950 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 TDS, 300, ORGM, 280 chloride, Fluoride, Sulfate 6020 - Bo, Ca Total Number of Containers: 2	
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 - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Special Instructions/Note: Detection Event	
Sample Identification FB-LF3-02 FERB-LF3-02 GWC-5 GWC-6 GWC-2 DUP-LF3-02		Sample Date: 1/31/19 Sample Time: 8:30 Sample Type (C=Comp, G=grab): G Preservation Code: Water PRELTA (W=water, S=solid, O=wastelol, BT=Tissue, A=Air)	
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: Peter A Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Date: 1/31/19 14:00 Date/Time: _____ Date/Time: _____ Date/Time: _____	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____		Method of Shipment: FedEx Date/Time: 2/1/19 1555 Date/Time: _____ Date/Time: _____	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements: _____	



Chain of Custody Record

Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: _____ Email: jabraham@southerco.com, jimpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: _____		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): _____	
Sampler: Peter A, Jake A, Lauren C, Johnnie N Phone: 4045920096		Page: _____ of _____ Job #: _____	
Due Date Requested: _____ TAT Requested (days): _____ Standard: _____ PO #: SCS10347656 WO #: _____ Project #: 18019950 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 6020 - Ba, Be, Cr, Co, Cu, Pb, Va, Zn <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No TDS, 300, ORGM, 28D chloride, Fluoride, Sulfate <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Identification FB-LF3-02 FERB-LF3-02 GWC-5 GWC-6 DUP-LF3-02		Total Number of containers: 2	
Sample Date: 1/31/19 Sample Time: 8:30 Sample Type (C=Comp, G=grab): G Preservation Code: Water		Special Instructions/Note: State Compliance Event	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify) _____		Special Instructions/QC Requirements: _____	
Empty Kit Relinquished by: Peter A Relinquished by: _____ Relinquished by: _____		Method of Shipment: FedEx Date/Time: 2/1/19 1555 Date/Time: _____ Date/Time: _____	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: _____	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Atlanta

 681

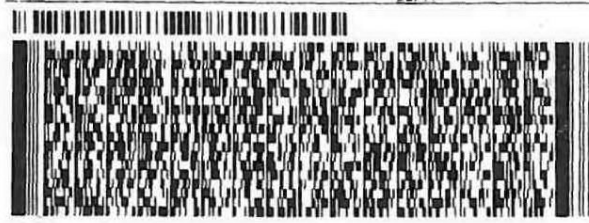
ORIGIN ID: DBNA (412) 963-2435
 VERONICA BORTOT
 301 ALPHA DR
 PITTSBURGH, PA 15238
 UNITED STATES US

SHIP DATE: 31JAN19
 ACTWGT: 32.30 LB
 CAD: 6997664/SSFO1922
 DIMS: 24x13x13 IN
 BILL RECIPIENT

TO **VERONICA BORTOT**
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-2436 REF:
 THU: DEPT:



FedEx
 Express



 180-86297 Waybill

TRK# 7852 4878 7536
 0201

FRI - 01 FEB 10:30A
PRIORITY OVERNIGHT

NA AGCA

ASR
15238
PIT
 PA-US

Uncorrected temp 018
 Thermometer ID 10
 CF 0 Initials TN
 PT-WI-SR-001 effective 11/8/18


Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-86297-2
SDG Number: L3 State Compliance

Login Number: 86297
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

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	
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.	N/A	



Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Laboratory: Test America, Pittsburgh, PA
Report No.: 180-86243-2
Reviewer: Lorie MacKinnon/GEI Consultants
Date: March 14, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
GWC-1	180-86243-01	Metals, Anions, TDS
GWA-1A	180-86243-02	Metals, Anions, TDS
GWA-2A	180-86243-03	Metals, Anions, TDS
GWA-2B	180-86243-04	Metals, Anions, TDS
GWC-3	180-86243-05	Metals, Anions, TDS
GWA-3A	180-86243-06	Metals, Anions, TDS
GWA-3B	180-86243-07	Metals, Anions, TDS
GWA-4	180-86243-08	Metals, Anions, TDS
GWC-4A	180-86243-09	Metals, Anions, TDS
GWA-5	180-86243-10	Metals, Anions, TDS
GWA-7	180-86243-11	Metals, Anions, TDS
GWA-7A	180-86243-12	Metals, Anions, TDS
DUP-LF3-01	180-86243-13	Metals, Anions, TDS
FB-LF3-01	180-86243-14	Metals, Anions, TDS
FERB-LF3-01	180-86243-15	Metals, Anions, TDS

QC Samples: Field/Equipment blanks: FB-LF3-01, FERB-LF3-01
 Field Duplicate pairs: GWC-1/DUP-LF3-01

The above-listed aqueous samples, equipment blank, and field blank sample were collected on January 30, 2019 and were analyzed for select total recoverable metals by SW-846 method 6020, total dissolved solids (TDS) by Standard Methods SM 2540C, and anions (chloride, fluoride, and sulfate) by EPA method 300. The data were reviewed based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review, January 2017 (USEPA-540-R-2017-001), as well as by the methods referenced and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Method and Field Blanks
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
 Report No.: 180-86243-2
 Date: March 14, 2019

- Field Duplicate Results
- Quantitation Limits

All results are usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

The validation findings were based on the following information.

Data Completeness

The level 2 (reduced deliverable) data package was complete as received by the laboratory and included sample results, method blank, MS/MSD, laboratory duplicate, and LCS results. A revision of this report was received for review which included the correction of reporting limits.

Holding Times and Sample Preservation

All criteria were met.

Method and Field Blanks

Field Blank Results

Contamination was not detected in the associated field blank samples.

Laboratory Blank Results

Low level laboratory contamination was detected in select laboratory method blank samples. The following table summarizes the contamination and validation actions taken.

Analyte	Blank ID/ Associated Samples	Maximum Contamina nt Level (mg/L)	10x Action Level (mg/L)	Validation Actions
Chromium	Method MB180-269611: GWC-1, GWA-1A, GWA-2A, GWA-2B, GWC-3, GWA-3A, GWA-3B	0.00117	0.0117	Qualify results for chromium in sample GWC-1 and GWA-2A as nondetect (U) at the RL. Estimate (J) the positive results for chromium in samples GWA-1A, GWA-2B, GWC-3, GWA-3A, and GWA-3B; High bias.
Vanadium		0.000971	0.0097	Qualify results for vanadium in samples GWA-1A, GWA-2A, GWA-2B, GWC-3, and GWA-3A as nondetect (U) at the RL. Estimate (J) the positive result for vanadium in sample GWA-3B; High bias.

Blank Actions:

If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.

If the sample result is ≥ RL and <2x blank contamination detected; professional judgment was taken to report the result as nondetect (U) at the reported value.

If the sample result is ≥ 2x blank and < 10x Action Level; report the sample result as estimated (J); biased high.

If the sample result is nondetect or > 10x Action Level; validation action is not required.

GEI Consultants, Inc.

MS/MSD Results

MS/MSD analyses were performed on samples GWC-3 and GWA-7 for anions and sample GWA-3A for metals. All criteria were met.

Laboratory Duplicate Results

MSD analyses were performed for anions and metals in lieu of laboratory duplicate analyses.

LCS Results

All criteria were met.

Field Duplicate Results

Samples GWC-1 and DUP-LF3-01 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria except for barium. The positive results for barium in samples GWC-1 and DUP-LF3-01 were qualified as estimated (J). The direction of the bias cannot be determined from this nonconformance.

Analyte	GWC-1 (mg/L)	DUP-LF3-01 (mg/L)	RPD (%)
Chloride	4.9	4.8	2.1
Sulfate	0.58 J	0.74 J	24.2
Barium	0.018	0.013	32.3
Beryllium	0.000090 J	0.0025 U	NC, Within the RL
Cobalt	0.00023 J	0.00013 J	55.6, Within the RL
Chromium	0.025 U	0.00092 J	NC, Within the RL
Calcium	0.24 J	0.21 J	13.3
Total Dissolved Solids	24	34	34.5, Within the RL
NC – Not calculable Criteria: When both results are $\geq 5x$ the RL, RPDs must be $< 30\%$. When results are $< 5x$ the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate $> RL$.			

Quantitation Limits

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL). These results were qualified as estimated (J) by the laboratory.

DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- NJ - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Report No.: 180-86297-2
Date: March 14, 2019

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Laboratory: Test America, Pittsburgh, PA
Report No.: 180-86297-2
Reviewer: Lorie MacKinnon/GEI Consultants
Date: March 14, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
FB-LF3-02	180-86297-01	Metals, Anions, TDS
FERB-LF3-02	180-86297-02	Metals, Anions, TDS
GWC-5	180-86297-03	Metals, Anions, TDS
GWC-6	180-86297-04	Metals, Anions, TDS
GWC-2	180-86297-05	Metals, Anions, TDS
DUP-LF3-02	180-86297-06	Metals, Anions, TDS

QC Samples: Field/Equipment blanks: FB-LF3-02, FERB-LF3-02
 Field Duplicate pairs: GWC-2/DUP-LF3-02

The above-listed aqueous samples, equipment blank, and field blank sample were collected on January 31, 2019 and were analyzed for select total recoverable metals by SW-846 method 6020, total dissolved solids (TDS) by Standard Methods SM 2540C, and anions (chloride, fluoride, and sulfate) by EPA method 300. The data were reviewed based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review, January 2017 (USEPA-540-R-2017-001), as well as by the methods referenced and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Laboratory and Field Blanks
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Field Duplicate Results
- Quantitation Limits

All results are usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

The validation findings were based on the following information.

Data Completeness

The level 2 (reduced deliverable) data package was complete as received by the laboratory and included sample results, method blank, MS/MSD, laboratory duplicate, and LCS results with the following exception: the reporting limits for boron and calcium were incorrect. Upon initial review, as the anion field duplicate results did not match and anion results for samples GWC-5 and GWC-2 were not consistent with historical results, the laboratory was requested to reanalyze anion samples GWC-5, GWC-2, and DUP-LF3-02. The reanalysis confirmed that the samples were switched when at the instrument for analysis. The anion reanalysis results were reported for these samples. A revision of this report was received for review which included the correction of reporting limits and anion results.

Holding Times and Sample Preservation

All criteria were met.

Blank Results

Laboratory Blank Results

Low level laboratory contamination was detected in the associated metals method blank. Laboratory blank contamination was evaluated prior to possible field blank contamination. The following table summarizes the contamination and validation actions taken.

Analyte	Blank ID/ Associated Samples	Concentration (mg/L)	10x Action Level (mg/L)	Validation Actions
Lead	Method blank MB180-269614: All samples	0.000279 J	0.00279	Qualify results for lead in samples FB-LF3-02, FERB-LF3-02, GWC-5, GWC-6, GWC-2, and DUP-LF3-02 as nondetect (U) at the RL.
Zinc		0.00397 J	0.0397	Qualify results for zinc in samples GWC-6, GWC-2, and DUP-LF3-02 as nondetect (U) at the reporting limit. Estimate (J) the positive result for zinc in sample GWC-5; High bias.

Blank Actions:

If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.

If the sample result is ≥ RL and <2x blank contamination detected; report the result as nondetect (U) at the reported value.

If the sample result is ≥ 2x blank contamination and < 10x Action Level; report the sample result as estimated (J); biased high.

If the sample result is nondetect or > 10x Action Level; validation action is not required.

Field Blank Results

Low level laboratory contamination was detected in the metals field blanks after evaluation of method blank contamination. The following table summarizes the highest level of contamination and validation actions taken.

Analyte	Blank ID/ Associated Samples	Maximum Contamina nt Level (mg/L)	10x Action Level (mg/L)	Validation Actions
Chromium	FB-LF3-02/FERB-LF3-02: All samples	0.0014	0.014	Qualify results for chromium in samples GWC-5 and GWC-6 as nondetect (U) at the RL. Estimate (J) the positive results for chromium in samples GWC-2 and DUP-LF3-02; High bias.
Calcium		0.16	1.6	Validation actions were not required.
Vanadium		0.00091	0.0091	Qualify results for vanadium in samples GWC-5, GW-6, and GWC-2 as nondetect (U) at the reporting limit.

Blank Actions:

If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.

If the sample result is \geq RL and <2x blank contamination detected; report the result as nondetect (U) at the reported value.

If the sample result is \geq 2x blank contamination and < 10x Action Level; report the sample result as estimated (J); biased high.

If the sample result is nondetect or > 10x Action Level; validation action is not required.

MS/MSD Results

MS/MSD analyses were performed on sample GWC-2 for anions. All criteria were met.

Laboratory Duplicate Results

MSD analyses were performed for anions in lieu of laboratory duplicate analyses.

LCS Results

All criteria were met.

Field Duplicate Results

Samples GWC-2 and DUP-LF3-02 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria.

Analyte	GWC-2 (mg/L)	DUP-LF3-02 (mg/L)	RPD (%)
Chloride	5.2	5.2	0
Fluoride	0.10 U	0.026 J	NC, Within the RL
Sulfate	0.57 J	0.48 J	17.1
Barium	0.067	0.067	0

Analyte	GWC-2 (mg/L)	DUP-LF3-02 (mg/L)	RPD (%)
Beryllium	0.000065 J	0.000087 J	28.9
Cobalt	0.00092 J	0.00088 J	4.4
Chromium	0.0061	0.0057	6.8
Calcium	4.8	4.5	6.5
Boron	0.040 J	0.038 J	5.1
Total Dissolved Solids	45	45	0
NC – Not calculable Criteria: When both results are $\geq 5x$ the RL, RPDs must be $< 30\%$. When results are $< 5x$ the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate $> RL$.			

Quantitation Limits

Results were reported that were below the reporting limit (RL) and above the method detection limit (MDL). These results were qualified as estimated (J) by the laboratory.

DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- NJ - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88221-2

Laboratory Sample Delivery Group: LF 3 State Compliance
Client Project/Site: CCR - Plant McIntosh Ash Landfill #3

For:

Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
4/11/2019 4:40:06 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	11
QC Sample Results	13
QC Association Summary	16
Chain of Custody	17
Receipt Checklists	20

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

Job ID: 180-88221-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-88221-2

Comments

No additional comments.

Receipt

The samples were received on 3/28/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 3.4° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

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)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

Laboratory: Eurofins TestAmerica, Pittsburgh

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
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19 *
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

Laboratory: Eurofins 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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88221-1	GWA-2A	Water	03/27/19 16:20	03/28/19 08:45
180-88221-2	GWA-1A	Water	03/27/19 16:30	03/28/19 08:45
180-88221-3	GWA-5	Water	03/27/19 16:45	03/28/19 08:45

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

Client Sample ID: GWA-2A

Date Collected: 03/27/19 16:20

Date Received: 03/28/19 08:45

Lab Sample ID: 180-88221-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275048	04/08/19 07:30	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436360	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Prep	3005A			50 mL	50 mL	436360	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 21:34	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274517	04/01/19 15:53	TAM	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-1A

Date Collected: 03/27/19 16:30

Date Received: 03/28/19 08:45

Lab Sample ID: 180-88221-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275048	04/08/19 07:46	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436360	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 21:54	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274517	04/01/19 15:53	TAM	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-5

Date Collected: 03/27/19 16:45

Date Received: 03/28/19 08:45

Lab Sample ID: 180-88221-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275048	04/08/19 12:46	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436360	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 21:58	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274517	04/01/19 15:53	TAM	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

Batch Type: Analysis

DRE = Daniel Etscheid

Lab: TAL PIT

Batch Type: Analysis

MJH = Matthew Hartman

TAM = Tessa Mastalski

1

2

3

4

5

6

7

8

9

10

11

12

13

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

Client Sample ID: GWA-2A

Lab Sample ID: 180-88221-1

Date Collected: 03/27/19 16:20

Matrix: Water

Date Received: 03/28/19 08:45

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.71	mg/L			04/08/19 07:30	1
Fluoride	<0.026		0.20	0.026	mg/L			04/08/19 07:30	1
Sulfate	<0.38		1.0	0.38	mg/L			04/08/19 07:30	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.039		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 21:34	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 21:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 21:34	5
Calcium	3.4		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 21:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 21:34	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 21:34	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 21:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 21:34	5
Vanadium	0.0014	J	0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 21:34	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 21:34	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	75		10	10	mg/L			04/01/19 15:53	1

Client Sample ID: GWA-1A

Lab Sample ID: 180-88221-2

Date Collected: 03/27/19 16:30

Matrix: Water

Date Received: 03/28/19 08:45

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.1		1.0	0.71	mg/L			04/08/19 07:46	1
Fluoride	<0.026		0.20	0.026	mg/L			04/08/19 07:46	1
Sulfate	<0.38		1.0	0.38	mg/L			04/08/19 07:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.021		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 21:54	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 21:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 21:54	5
Calcium	1.6		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 21:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 21:54	5
Chromium	0.0044		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 21:54	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 21:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 21:54	5
Vanadium	0.0029		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 21:54	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 21:54	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	66		10	10	mg/L			04/01/19 15:53	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

Client Sample ID: GWA-5

Lab Sample ID: 180-88221-3

Date Collected: 03/27/19 16:45

Matrix: Water

Date Received: 03/28/19 08:45

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.1		1.0	0.71	mg/L			04/08/19 12:46	1
Fluoride	0.10	J	0.20	0.026	mg/L			04/08/19 12:46	1
Sulfate	20		1.0	0.38	mg/L			04/08/19 12:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.12		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 21:58	5
Boron	0.036	J	0.050	0.021	mg/L		04/09/19 11:00	04/09/19 21:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 21:58	5
Calcium	3.1		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 21:58	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 21:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 21:58	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 21:58	5
Lead	0.0012	J	0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 21:58	5
Vanadium	0.0082		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 21:58	5
Zinc	0.010	J	0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 21:58	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		10	10	mg/L			04/01/19 15:53	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
SDG: LF 3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-275048/5
Matrix: Water
Analysis Batch: 275048

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/08/19 05:23	1
Fluoride	<0.026		0.20	0.026	mg/L			04/08/19 05:23	1
Sulfate	<0.38		1.0	0.38	mg/L			04/08/19 05:23	1

Lab Sample ID: LCS 180-275048/6
Matrix: Water
Analysis Batch: 275048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.0		mg/L		102	90 - 110
Fluoride	2.50	2.45		mg/L		98	90 - 110
Sulfate	50.0	50.6		mg/L		101	90 - 110

Lab Sample ID: 180-88221-3 MS
Matrix: Water
Analysis Batch: 275048

Client Sample ID: GWA-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.1		25.0	34.2		mg/L		100	80 - 120
Fluoride	0.10	J	1.25	1.30		mg/L		96	80 - 120
Sulfate	20		25.0	44.1		mg/L		97	80 - 120

Lab Sample ID: 180-88221-3 MSD
Matrix: Water
Analysis Batch: 275048

Client Sample ID: GWA-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.1		25.0	33.3		mg/L		97	80 - 120	3	20
Fluoride	0.10	J	1.25	1.26		mg/L		92	80 - 120	3	20
Sulfate	20		25.0	43.1		mg/L		93	80 - 120	2	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-436360/1-A ^5
Matrix: Water
Analysis Batch: 436562

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 21:02	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 21:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 21:02	5
Calcium	<0.13		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 21:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 21:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 21:02	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 21:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 21:02	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 21:02	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 21:02	5

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-436360/2-A
Matrix: Water
Analysis Batch: 436562

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	0.0500	0.0468		mg/L		94	80 - 120
Boron	0.100	0.104		mg/L		104	80 - 120
Beryllium	0.0500	0.0493		mg/L		99	80 - 120
Calcium	5.00	4.93		mg/L		99	80 - 120
Cobalt	0.0500	0.0508		mg/L		102	80 - 120
Chromium	0.0500	0.0491		mg/L		98	80 - 120
Copper	0.0500	0.0503		mg/L		101	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Vanadium	0.0500	0.0478		mg/L		96	80 - 120
Zinc	0.0500	0.0486		mg/L		97	80 - 120

Lab Sample ID: 180-88221-1 MS
Matrix: Water
Analysis Batch: 436562

Client Sample ID: GWA-2A
Prep Type: Total Recoverable
Prep Batch: 436360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	0.039		0.0500	0.0840		mg/L		90	75 - 125
Boron	<0.021		0.100	0.120		mg/L		120	75 - 125
Beryllium	<0.00034		0.0500	0.0495		mg/L		99	75 - 125
Calcium	3.4		5.00	8.08		mg/L		93	75 - 125
Cobalt	<0.00040		0.0500	0.0510		mg/L		102	75 - 125
Chromium	0.0015	J	0.0500	0.0502		mg/L		98	75 - 125
Copper	<0.0021		0.0500	0.0505		mg/L		101	75 - 125
Lead	<0.00035		0.0500	0.0501		mg/L		100	75 - 125
Vanadium	0.0014	J	0.0500	0.0490		mg/L		98	75 - 125
Zinc	<0.0065		0.0500	0.0510		mg/L		102	75 - 125

Lab Sample ID: 180-88221-1 MSD
Matrix: Water
Analysis Batch: 436562

Client Sample ID: GWA-2A
Prep Type: Total Recoverable
Prep Batch: 436360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	0.039		0.0500	0.0879		mg/L		98	75 - 125	4	20
Boron	<0.021		0.100	0.123		mg/L		123	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125	2	20
Calcium	3.4		5.00	8.49		mg/L		101	75 - 125	5	20
Cobalt	<0.00040		0.0500	0.0533		mg/L		107	75 - 125	4	20
Chromium	0.0015	J	0.0500	0.0520		mg/L		101	75 - 125	3	20
Copper	<0.0021		0.0500	0.0524		mg/L		105	75 - 125	4	20
Lead	<0.00035		0.0500	0.0499		mg/L		100	75 - 125	0	20
Vanadium	0.0014	J	0.0500	0.0519		mg/L		104	75 - 125	6	20
Zinc	<0.0065		0.0500	0.0528		mg/L		106	75 - 125	4	20

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-274517/2
Matrix: Water
Analysis Batch: 274517

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	<10		10	10	mg/L			04/01/19 15:53	1

Lab Sample ID: LCS 180-274517/1
Matrix: Water
Analysis Batch: 274517

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	304	324		mg/L		107	80 - 120

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88221-2
 SDG: LF 3 State Compliance

HPLC/IC

Analysis Batch: 275048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88221-1	GWA-2A	Total/NA	Water	EPA 300.0 R2.1	
180-88221-2	GWA-1A	Total/NA	Water	EPA 300.0 R2.1	
180-88221-3	GWA-5	Total/NA	Water	EPA 300.0 R2.1	
MB 180-275048/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-275048/6	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-88221-3 MS	GWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-88221-3 MSD	GWA-5	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 436360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88221-1	GWA-2A	Total Recoverable	Water	3005A	
180-88221-2	GWA-1A	Total Recoverable	Water	3005A	
180-88221-3	GWA-5	Total Recoverable	Water	3005A	
MB 400-436360/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-436360/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-88221-1 MS	GWA-2A	Total Recoverable	Water	3005A	
180-88221-1 MSD	GWA-2A	Total Recoverable	Water	3005A	

Analysis Batch: 436562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88221-1	GWA-2A	Total Recoverable	Water	6020	436360
180-88221-2	GWA-1A	Total Recoverable	Water	6020	436360
180-88221-3	GWA-5	Total Recoverable	Water	6020	436360
MB 400-436360/1-A ^5	Method Blank	Total Recoverable	Water	6020	436360
LCS 400-436360/2-A	Lab Control Sample	Total Recoverable	Water	6020	436360
180-88221-1 MS	GWA-2A	Total Recoverable	Water	6020	436360
180-88221-1 MSD	GWA-2A	Total Recoverable	Water	6020	436360

General Chemistry

Analysis Batch: 274517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88221-1	GWA-2A	Total/NA	Water	SM 2540C	
180-88221-2	GWA-1A	Total/NA	Water	SM 2540C	
180-88221-3	GWA-5	Total/NA	Water	SM 2540C	
MB 180-274517/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-274517/1	Lab Control Sample	Total/NA	Water	SM 2540C	

ORIGIN ID: SAVA (770) 912-0703
LAUREN COXER
RIDC PARK 301 ALPHA DR
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 27MAR18
ACT WT: 49.80 LB
CAD: 006894920/SSFE2002
DIM: 23x14x12 IN
BILL THIRD PARTY

TO VERONICA BOROT

RIDC PARK 301 ALPHA DR

PITTSBURGH PA 15238

(412) 868-7058
PKY
201



THU - 20 MAR 18:30A
PRIORITY OVERNIGHT
DSR
15238
PA-08
PIT

TRK 1 7862 9550 8690
D201

XH AGCA

1.9 °C
10
TB

Uncorrected temp
Thermometer ID

CF 0 Initials

PT-WI-SR-001 effective 11/8/18



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

ORIGIN ID: SAVA (770) 912-0703
LAUREN COKER
RIDC PARK
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 27MAR19
ACTWGT: 45.50 LBS
CAD: 006984920/5SFE2002
DIMS: 23X12X13 IN
BILL THIRD

0 VERONICA BORTOT

RIDC PARK 301 ALPA RT 97

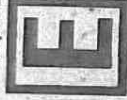
PITTSBURGH PA 15238 FZ

(412) 637-7068
REF: 1010 03.28

REF: 1010 03.28



FedEx
Express



AN1020106L0161

TRK# 7862 9559 1010
0201

THU - 28 MAR 10:30A
PRIORITY OVERNIGHT

XH AGCA

DSR 15238
PA-US PIT

Uncorrected temp 3.4 °C
Thermometer ID 10
CF 0 Initials BS

PT-VI-SR-001 effective 11/8/18

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88221-2
SDG Number: LF 3 State Compliance

Login Number: 88221

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

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	
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.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88319-2

Laboratory Sample Delivery Group: LF3 State Compliance
Client Project/Site: CCR - Plant McIntosh Ash Landfill #3

For:

Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
4/12/2019 2:59:02 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	15
QC Sample Results	25
QC Association Summary	29
Chain of Custody	32
Receipt Checklists	47

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Job ID: 180-88319-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-88319-2

Comments

No additional comments.

Receipt

The samples were received on 3/29/2019 8:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.0° C and 2.8° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

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)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Laboratory: Eurofins TestAmerica, Pittsburgh

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
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19 *
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Laboratory: Eurofins 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	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88319-1	GWA-4	Water	03/28/19 09:50	03/29/19 08:50
180-88319-2	GWA-2B	Water	03/28/19 10:05	03/29/19 08:50
180-88319-3	GWA-3B	Water	03/28/19 11:05	03/29/19 08:50
180-88319-4	GWC-1	Water	03/28/19 11:10	03/29/19 08:50
180-88319-5	GWA-7	Water	03/28/19 12:10	03/29/19 08:50
180-88319-6	GWA-7-FILTERED	Water	03/28/19 12:05	03/29/19 08:50
180-88319-7	GWC-3	Water	03/28/19 12:50	03/29/19 08:50
180-88319-8	GWA-3A	Water	03/28/19 12:55	03/29/19 08:50
180-88319-9	GWA-7A	Water	03/28/19 13:20	03/29/19 08:50
180-88319-10	GWC-2	Water	03/28/19 14:20	03/29/19 08:50
180-88319-11	GWC-5	Water	03/28/19 14:20	03/29/19 08:50
180-88319-12	GWC-4A	Water	03/28/19 14:35	03/29/19 08:50
180-88319-13	GWC-6	Water	03/28/19 14:40	03/29/19 08:50
180-88319-14	DUP-LF3-01	Water	03/28/19 00:00	03/29/19 08:50
180-88319-15	DUP-LF3-02	Water	03/28/19 00:00	03/29/19 08:50
180-88319-16	FB-LF3-01	Water	03/28/19 15:00	03/29/19 08:50
180-88319-17	FB-LF3-02	Water	03/28/19 15:05	03/29/19 08:50
180-88319-18	FERB-LF3-01	Water	03/28/19 15:10	03/29/19 08:50
180-88319-19	FERB-LF3-02	Water	03/28/19 15:15	03/29/19 08:50

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: GWA-4

Date Collected: 03/28/19 09:50

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 06:49	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 18:48	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-2B

Date Collected: 03/28/19 10:05

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 07:52	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:27	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-3B

Date Collected: 03/28/19 11:05

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 08:09	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:31	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWC-1

Date Collected: 03/28/19 11:10

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 08:26	MJH	TAL PIT
Instrument ID: CHICS2000										

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: GWC-1
Date Collected: 03/28/19 11:10
Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:35	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-7
Date Collected: 03/28/19 12:10
Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 08:43	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:39	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-7-FILTERED
Date Collected: 03/28/19 12:05
Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 09:00	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:43	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWC-3
Date Collected: 03/28/19 12:50
Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 11:15	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:47	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: GWA-3A

Lab Sample ID: 180-88319-8

Date Collected: 03/28/19 12:55

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 11:32	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:51	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-7A

Lab Sample ID: 180-88319-9

Date Collected: 03/28/19 13:20

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 11:49	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:55	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWC-2

Lab Sample ID: 180-88319-10

Date Collected: 03/28/19 14:20

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 12:06	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 19:59	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWC-5

Lab Sample ID: 180-88319-11

Date Collected: 03/28/19 14:20

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275293	04/10/19 08:50	MJH	TAL PIT
Instrument ID: CHICS2100B										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWC-5

Date Collected: 03/28/19 14:20

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:03	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWC-4A

Date Collected: 03/28/19 14:35

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 13:47	MJH	TAL PIT
		Instrument ID: CHICS2000								
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:27	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWC-6

Date Collected: 03/28/19 14:40

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 12:23	MJH	TAL PIT
		Instrument ID: CHICS2000								
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:31	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: DUP-LF3-01

Date Collected: 03/28/19 00:00

Date Received: 03/29/19 08:50

Lab Sample ID: 180-88319-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 14:21	MJH	TAL PIT
		Instrument ID: CHICS2000								
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:35	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: DUP-LF3-02

Lab Sample ID: 180-88319-15

Date Collected: 03/28/19 00:00

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 14:38	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:39	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: FB-LF3-01

Lab Sample ID: 180-88319-16

Date Collected: 03/28/19 15:00

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 10:07	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:43	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: FB-LF3-02

Lab Sample ID: 180-88319-17

Date Collected: 03/28/19 15:05

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 10:24	MJH	TAL PIT
Instrument ID: CHICS2000										
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:47	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-88319-18

Date Collected: 03/28/19 15:10

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 10:41	MJH	TAL PIT
Instrument ID: CHICS2000										

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-88319-18

Date Collected: 03/28/19 15:10

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:51	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: FERB-LF3-02

Lab Sample ID: 180-88319-19

Date Collected: 03/28/19 15:15

Matrix: Water

Date Received: 03/29/19 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			275436	04/10/19 10:58	MJH	TAL PIT
		Instrument ID: CHICS2000								
Total Recoverable	Prep	3005A			50 mL	50 mL	436363	04/09/19 11:00	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			436562	04/09/19 20:55	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274732	04/03/19 12:07	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
 TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN
 Batch Type: Prep
 DRE = Daniel Etscheid
 Batch Type: Analysis
 DRE = Daniel Etscheid
 Lab: TAL PIT
 Batch Type: Analysis
 AVS = Abbey Smith
 MJH = Matthew Hartman

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWA-4

Lab Sample ID: 180-88319-1

Date Collected: 03/28/19 09:50

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.7		1.0	0.71	mg/L			04/10/19 06:49	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 06:49	1
Sulfate	3.0		1.0	0.38	mg/L			04/10/19 06:49	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.041		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 18:48	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 18:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 18:48	5
Calcium	0.98		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 18:48	5
Cobalt	0.00089	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 18:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 18:48	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 18:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 18:48	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 18:48	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 18:48	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: GWA-2B

Lab Sample ID: 180-88319-2

Date Collected: 03/28/19 10:05

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.1		1.0	0.71	mg/L			04/10/19 07:52	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 07:52	1
Sulfate	71		1.0	0.38	mg/L			04/10/19 07:52	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.035		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:27	5
Boron	0.83		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:27	5
Beryllium	0.0017	J	0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:27	5
Calcium	16		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:27	5
Cobalt	0.0046		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:27	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:27	5
Copper	0.0031		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:27	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:27	5
Zinc	0.014	J	0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:27	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWA-3B

Lab Sample ID: 180-88319-3

Date Collected: 03/28/19 11:05

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.7		1.0	0.71	mg/L			04/10/19 08:09	1
Fluoride	0.038	J	0.20	0.026	mg/L			04/10/19 08:09	1
Sulfate	7.9		1.0	0.38	mg/L			04/10/19 08:09	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.042		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:31	5
Boron	0.027	J	0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:31	5
Calcium	4.4		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:31	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:31	5
Lead	0.00052	J	0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:31	5
Vanadium	0.0028		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:31	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:31	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	55		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: GWC-1

Lab Sample ID: 180-88319-4

Date Collected: 03/28/19 11:10

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.1		1.0	0.71	mg/L			04/10/19 08:26	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 08:26	1
Sulfate	0.67	J	1.0	0.38	mg/L			04/10/19 08:26	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.014		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:35	5
Boron	0.021	J	0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:35	5
Calcium	0.15	J	0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:35	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:35	5
Vanadium	0.0024	J	0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:35	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:35	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	25		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWA-7

Lab Sample ID: 180-88319-5

Date Collected: 03/28/19 12:10

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5		1.0	0.71	mg/L			04/10/19 08:43	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 08:43	1
Sulfate	0.49	J	1.0	0.38	mg/L			04/10/19 08:43	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.031		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:39	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:39	5
Calcium	4.2		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:39	5
Cobalt	0.00086	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:39	5
Chromium	0.011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:39	5
Lead	0.0019		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:39	5
Vanadium	0.0094		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:39	5
Zinc	0.0066	J	0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:39	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	87		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: GWA-7-FILTERED

Lab Sample ID: 180-88319-6

Date Collected: 03/28/19 12:05

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		1.0	0.71	mg/L			04/10/19 09:00	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 09:00	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 09:00	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.014		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:43	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:43	5
Calcium	1.5		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:43	5
Chromium	0.0048		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:43	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:43	5
Vanadium	0.0063		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:43	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:43	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWC-3

Lab Sample ID: 180-88319-7

Date Collected: 03/28/19 12:50

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.8		1.0	0.71	mg/L			04/10/19 11:15	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 11:15	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 11:15	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.035		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:47	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:47	5
Calcium	2.0		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:47	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:47	5
Chromium	0.0037		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:47	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:47	5
Vanadium	0.0070		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:47	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:47	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	44		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: GWA-3A

Lab Sample ID: 180-88319-8

Date Collected: 03/28/19 12:55

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			04/10/19 11:32	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 11:32	1
Sulfate	0.44	J	1.0	0.38	mg/L			04/10/19 11:32	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.068		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:51	5
Boron	0.024	J	0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:51	5
Beryllium	0.00046	J	0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:51	5
Calcium	2.4		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:51	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:51	5
Chromium	0.0037		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:51	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:51	5
Lead	0.00038	J	0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:51	5
Vanadium	0.0076		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:51	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:51	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: GWA-7A

Lab Sample ID: 180-88319-9

Date Collected: 03/28/19 13:20

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.1		1.0	0.71	mg/L			04/10/19 11:49	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 11:49	1
Sulfate	85		1.0	0.38	mg/L			04/10/19 11:49	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.10		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:55	5
Boron	1.4		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:55	5
Beryllium	0.00034	J	0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:55	5
Calcium	18		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:55	5
Cobalt	0.0045		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:55	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:55	5
Vanadium	0.0053		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:55	5
Zinc	0.0086	J	0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:55	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: GWC-2

Lab Sample ID: 180-88319-10

Date Collected: 03/28/19 14:20

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.6		1.0	0.71	mg/L			04/10/19 12:06	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 12:06	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 12:06	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.064		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 19:59	5
Boron	0.062		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 19:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 19:59	5
Calcium	4.9		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 19:59	5
Cobalt	0.00072	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 19:59	5
Chromium	0.0049		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 19:59	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 19:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 19:59	5
Vanadium	0.0059		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 19:59	5
Zinc	0.0069	J	0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 19:59	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	45		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWC-5

Lab Sample ID: 180-88319-11

Date Collected: 03/28/19 14:20

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.5		1.0	0.71	mg/L			04/10/19 08:50	1
Fluoride	0.027	J	0.20	0.026	mg/L			04/10/19 08:50	1
Sulfate	3.0		1.0	0.38	mg/L			04/10/19 08:50	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.45		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:03	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:03	5
Beryllium	0.0017	J	0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:03	5
Calcium	7.2		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:03	5
Cobalt	0.013		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:03	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:03	5
Vanadium	0.0070		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:03	5
Zinc	0.032		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:03	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: GWC-4A

Lab Sample ID: 180-88319-12

Date Collected: 03/28/19 14:35

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		1.0	0.71	mg/L			04/10/19 13:47	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 13:47	1
Sulfate	1.1		1.0	0.38	mg/L			04/10/19 13:47	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.028		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:27	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:27	5
Calcium	0.30		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:27	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:27	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:27	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:27	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:27	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: GWC-6

Lab Sample ID: 180-88319-13

Date Collected: 03/28/19 14:40

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.0	0.71	mg/L			04/10/19 12:23	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 12:23	1
Sulfate	0.96	J	1.0	0.38	mg/L			04/10/19 12:23	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.045		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:31	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:31	5
Calcium	1.5		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:31	5
Cobalt	0.00070	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:31	5
Chromium	0.0019	J	0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:31	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:31	5
Lead	0.00052	J	0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:31	5
Vanadium	0.0047		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:31	5
Zinc	0.0084	J	0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:31	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	62		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: DUP-LF3-01

Lab Sample ID: 180-88319-14

Date Collected: 03/28/19 00:00

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.1		1.0	0.71	mg/L			04/10/19 14:21	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 14:21	1
Sulfate	0.71	J	1.0	0.38	mg/L			04/10/19 14:21	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.014		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:35	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:35	5
Calcium	0.16	J	0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:35	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:35	5
Vanadium	0.0042		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:35	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:35	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: DUP-LF3-02

Lab Sample ID: 180-88319-15

Date Collected: 03/28/19 00:00

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.7		1.0	0.71	mg/L			04/10/19 14:38	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 14:38	1
Sulfate	0.43	J	1.0	0.38	mg/L			04/10/19 14:38	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.064		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:39	5
Boron	0.042	J	0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:39	5
Calcium	4.7		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:39	5
Cobalt	0.00076	J	0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:39	5
Chromium	0.0047		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:39	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:39	5
Vanadium	0.0048		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:39	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:39	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: FB-LF3-01

Lab Sample ID: 180-88319-16

Date Collected: 03/28/19 15:00

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 10:07	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 10:07	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 10:07	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:43	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:43	5
Calcium	<0.13		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:43	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:43	5
Vanadium	0.0053		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:43	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:43	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

Client Sample ID: FB-LF3-02

Lab Sample ID: 180-88319-17

Date Collected: 03/28/19 15:05

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 10:24	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 10:24	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 10:24	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:47	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:47	5
Calcium	<0.13		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:47	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:47	5
Vanadium	0.0054		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:47	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:47	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/03/19 12:07	1

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-88319-18

Date Collected: 03/28/19 15:10

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 10:41	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 10:41	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 10:41	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:51	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:51	5
Calcium	<0.13		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:51	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:51	5
Vanadium	0.0051		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:51	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:51	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/03/19 12:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Client Sample ID: FERB-LF3-02

Lab Sample ID: 180-88319-19

Date Collected: 03/28/19 15:15

Matrix: Water

Date Received: 03/29/19 08:50

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 10:58	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 10:58	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 10:58	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 20:55	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 20:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 20:55	5
Calcium	<0.13		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 20:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 20:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 20:55	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 20:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 20:55	5
Vanadium	0.0049		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 20:55	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 20:55	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/03/19 12:07	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-275293/5
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 05:49	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 05:49	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 05:49	1

Lab Sample ID: LCS 180-275293/6
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.4		mg/L		101	90 - 110
Fluoride	2.50	2.40		mg/L		96	90 - 110
Sulfate	50.0	49.5		mg/L		99	90 - 110

Lab Sample ID: MB 180-275436/5
Matrix: Water
Analysis Batch: 275436

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 05:59	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 05:59	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 05:59	1

Lab Sample ID: LCS 180-275436/6
Matrix: Water
Analysis Batch: 275436

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	53.3		mg/L		107	90 - 110
Fluoride	2.50	2.54		mg/L		102	90 - 110
Sulfate	50.0	47.3		mg/L		95	90 - 110

Lab Sample ID: 180-88319-1 MS
Matrix: Water
Analysis Batch: 275436

Client Sample ID: GWA-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.7		25.0	33.0		mg/L		109	80 - 120
Fluoride	<0.026		1.25	1.23		mg/L		98	80 - 120
Sulfate	3.0		25.0	24.4		mg/L		86	80 - 120

Lab Sample ID: 180-88319-1 MSD
Matrix: Water
Analysis Batch: 275436

Client Sample ID: GWA-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.7		25.0	32.6		mg/L		107	80 - 120	1	20
Fluoride	<0.026		1.25	1.20		mg/L		96	80 - 120	2	20
Sulfate	3.0		25.0	23.8		mg/L		83	80 - 120	2	20

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-88319-12 MS
Matrix: Water
Analysis Batch: 275436

Client Sample ID: GWC-4A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	11		25.0	38.1		mg/L		109	80 - 120
Fluoride	<0.026		1.25	1.19		mg/L		95	80 - 120
Sulfate	1.1		25.0	21.7		mg/L		82	80 - 120

Lab Sample ID: 180-88319-12 MSD
Matrix: Water
Analysis Batch: 275436

Client Sample ID: GWC-4A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11		25.0	38.1		mg/L		109	80 - 120	0	20
Fluoride	<0.026		1.25	1.18		mg/L		95	80 - 120	1	20
Sulfate	1.1		25.0	21.6		mg/L		82	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-436363/1-A ^5
Matrix: Water
Analysis Batch: 436562

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436363

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/09/19 11:00	04/09/19 18:36	5
Boron	<0.021		0.050	0.021	mg/L		04/09/19 11:00	04/09/19 18:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/09/19 11:00	04/09/19 18:36	5
Calcium	<0.13		0.25	0.13	mg/L		04/09/19 11:00	04/09/19 18:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/09/19 11:00	04/09/19 18:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/09/19 11:00	04/09/19 18:36	5
Copper	<0.0021		0.0025	0.0021	mg/L		04/09/19 11:00	04/09/19 18:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/09/19 11:00	04/09/19 18:36	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		04/09/19 11:00	04/09/19 18:36	5
Zinc	<0.0065		0.020	0.0065	mg/L		04/09/19 11:00	04/09/19 18:36	5

Lab Sample ID: LCS 400-436363/2-A
Matrix: Water
Analysis Batch: 436562

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436363

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0500	0.0453		mg/L		91	80 - 120
Boron	0.100	0.0974		mg/L		97	80 - 120
Beryllium	0.0500	0.0461		mg/L		92	80 - 120
Calcium	5.00	4.67		mg/L		93	80 - 120
Cobalt	0.0500	0.0500		mg/L		100	80 - 120
Chromium	0.0500	0.0485		mg/L		97	80 - 120
Copper	0.0500	0.0491		mg/L		98	80 - 120
Lead	0.0500	0.0446		mg/L		89	80 - 120
Vanadium	0.0500	0.0479		mg/L		96	80 - 120
Zinc	0.0500	0.0478		mg/L		96	80 - 120

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-88319-1 MS
Matrix: Water
Analysis Batch: 436562

Client Sample ID: GWA-4
Prep Type: Total Recoverable
Prep Batch: 436363

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	0.041		0.0500	0.0874		mg/L		94	75 - 125
Boron	<0.021		0.100	0.125		mg/L		125	75 - 125
Beryllium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125
Calcium	0.98		5.00	6.06		mg/L		101	75 - 125
Cobalt	0.00089	J	0.0500	0.0517		mg/L		102	75 - 125
Chromium	<0.0011		0.0500	0.0493		mg/L		99	75 - 125
Copper	<0.0021		0.0500	0.0513		mg/L		103	75 - 125
Lead	<0.00035		0.0500	0.0497		mg/L		99	75 - 125
Vanadium	<0.0014		0.0500	0.0491		mg/L		98	75 - 125
Zinc	<0.0065		0.0500	0.0544		mg/L		109	75 - 125

Lab Sample ID: 180-88319-1 MSD
Matrix: Water
Analysis Batch: 436562

Client Sample ID: GWA-4
Prep Type: Total Recoverable
Prep Batch: 436363

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	0.041		0.0500	0.0971		mg/L		113	75 - 125	10	20
Boron	<0.021		0.100	0.114		mg/L		114	75 - 125	9	20
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125	3	20
Calcium	0.98		5.00	6.72		mg/L		115	75 - 125	10	20
Cobalt	0.00089	J	0.0500	0.0555		mg/L		109	75 - 125	7	20
Chromium	<0.0011		0.0500	0.0529		mg/L		106	75 - 125	7	20
Copper	<0.0021		0.0500	0.0546		mg/L		109	75 - 125	6	20
Lead	<0.00035		0.0500	0.0470		mg/L		94	75 - 125	6	20
Vanadium	<0.0014		0.0500	0.0524		mg/L		105	75 - 125	7	20
Zinc	<0.0065		0.0500	0.0588		mg/L		118	75 - 125	8	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-274732/2
Matrix: Water
Analysis Batch: 274732

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	<10		10	10	mg/L			04/03/19 12:07	1

Lab Sample ID: LCS 180-274732/1
Matrix: Water
Analysis Batch: 274732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	304	278		mg/L		91	80 - 120

Lab Sample ID: 180-88319-9 DU
Matrix: Water
Analysis Batch: 274732

Client Sample ID: GWA-7A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	170		162		mg/L		5	10

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 180-88319-11 DU
Matrix: Water
Analysis Batch: 274732

Client Sample ID: GWC-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	110		108		mg/L	-	5	10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

HPLC/IC

Analysis Batch: 275293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-11	GWC-5	Total/NA	Water	EPA 300.0 R2.1	
MB 180-275293/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-275293/6	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 275436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-1	GWA-4	Total/NA	Water	EPA 300.0 R2.1	
180-88319-2	GWA-2B	Total/NA	Water	EPA 300.0 R2.1	
180-88319-3	GWA-3B	Total/NA	Water	EPA 300.0 R2.1	
180-88319-4	GWC-1	Total/NA	Water	EPA 300.0 R2.1	
180-88319-5	GWA-7	Total/NA	Water	EPA 300.0 R2.1	
180-88319-6	GWA-7-FILTERED	Total/NA	Water	EPA 300.0 R2.1	
180-88319-7	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-88319-8	GWA-3A	Total/NA	Water	EPA 300.0 R2.1	
180-88319-9	GWA-7A	Total/NA	Water	EPA 300.0 R2.1	
180-88319-10	GWC-2	Total/NA	Water	EPA 300.0 R2.1	
180-88319-12	GWC-4A	Total/NA	Water	EPA 300.0 R2.1	
180-88319-13	GWC-6	Total/NA	Water	EPA 300.0 R2.1	
180-88319-14	DUP-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-88319-15	DUP-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
180-88319-16	FB-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-88319-17	FB-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
180-88319-18	FERB-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-88319-19	FERB-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
MB 180-275436/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-275436/6	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-88319-1 MS	GWA-4	Total/NA	Water	EPA 300.0 R2.1	
180-88319-1 MSD	GWA-4	Total/NA	Water	EPA 300.0 R2.1	
180-88319-12 MS	GWC-4A	Total/NA	Water	EPA 300.0 R2.1	
180-88319-12 MSD	GWC-4A	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 436363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-1	GWA-4	Total Recoverable	Water	3005A	
180-88319-2	GWA-2B	Total Recoverable	Water	3005A	
180-88319-3	GWA-3B	Total Recoverable	Water	3005A	
180-88319-4	GWC-1	Total Recoverable	Water	3005A	
180-88319-5	GWA-7	Total Recoverable	Water	3005A	
180-88319-6	GWA-7-FILTERED	Total Recoverable	Water	3005A	
180-88319-7	GWC-3	Total Recoverable	Water	3005A	
180-88319-8	GWA-3A	Total Recoverable	Water	3005A	
180-88319-9	GWA-7A	Total Recoverable	Water	3005A	
180-88319-10	GWC-2	Total Recoverable	Water	3005A	
180-88319-11	GWC-5	Total Recoverable	Water	3005A	
180-88319-12	GWC-4A	Total Recoverable	Water	3005A	
180-88319-13	GWC-6	Total Recoverable	Water	3005A	
180-88319-14	DUP-LF3-01	Total Recoverable	Water	3005A	
180-88319-15	DUP-LF3-02	Total Recoverable	Water	3005A	
180-88319-16	FB-LF3-01	Total Recoverable	Water	3005A	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
 SDG: LF3 State Compliance

Metals (Continued)

Prep Batch: 436363 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-17	FB-LF3-02	Total Recoverable	Water	3005A	
180-88319-18	FERB-LF3-01	Total Recoverable	Water	3005A	
180-88319-19	FERB-LF3-02	Total Recoverable	Water	3005A	
MB 400-436363/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-436363/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-88319-1 MS	GWA-4	Total Recoverable	Water	3005A	
180-88319-1 MSD	GWA-4	Total Recoverable	Water	3005A	

Analysis Batch: 436562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-1	GWA-4	Total Recoverable	Water	6020	436363
180-88319-2	GWA-2B	Total Recoverable	Water	6020	436363
180-88319-3	GWA-3B	Total Recoverable	Water	6020	436363
180-88319-4	GWC-1	Total Recoverable	Water	6020	436363
180-88319-5	GWA-7	Total Recoverable	Water	6020	436363
180-88319-6	GWA-7-FILTERED	Total Recoverable	Water	6020	436363
180-88319-7	GWC-3	Total Recoverable	Water	6020	436363
180-88319-8	GWA-3A	Total Recoverable	Water	6020	436363
180-88319-9	GWA-7A	Total Recoverable	Water	6020	436363
180-88319-10	GWC-2	Total Recoverable	Water	6020	436363
180-88319-11	GWC-5	Total Recoverable	Water	6020	436363
180-88319-12	GWC-4A	Total Recoverable	Water	6020	436363
180-88319-13	GWC-6	Total Recoverable	Water	6020	436363
180-88319-14	DUP-LF3-01	Total Recoverable	Water	6020	436363
180-88319-15	DUP-LF3-02	Total Recoverable	Water	6020	436363
180-88319-16	FB-LF3-01	Total Recoverable	Water	6020	436363
180-88319-17	FB-LF3-02	Total Recoverable	Water	6020	436363
180-88319-18	FERB-LF3-01	Total Recoverable	Water	6020	436363
180-88319-19	FERB-LF3-02	Total Recoverable	Water	6020	436363
MB 400-436363/1-A ^5	Method Blank	Total Recoverable	Water	6020	436363
LCS 400-436363/2-A	Lab Control Sample	Total Recoverable	Water	6020	436363
180-88319-1 MS	GWA-4	Total Recoverable	Water	6020	436363
180-88319-1 MSD	GWA-4	Total Recoverable	Water	6020	436363

General Chemistry

Analysis Batch: 274732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-1	GWA-4	Total/NA	Water	SM 2540C	
180-88319-2	GWA-2B	Total/NA	Water	SM 2540C	
180-88319-3	GWA-3B	Total/NA	Water	SM 2540C	
180-88319-4	GWC-1	Total/NA	Water	SM 2540C	
180-88319-5	GWA-7	Total/NA	Water	SM 2540C	
180-88319-6	GWA-7-FILTERED	Total/NA	Water	SM 2540C	
180-88319-7	GWC-3	Total/NA	Water	SM 2540C	
180-88319-8	GWA-3A	Total/NA	Water	SM 2540C	
180-88319-9	GWA-7A	Total/NA	Water	SM 2540C	
180-88319-10	GWC-2	Total/NA	Water	SM 2540C	
180-88319-11	GWC-5	Total/NA	Water	SM 2540C	
180-88319-12	GWC-4A	Total/NA	Water	SM 2540C	
180-88319-13	GWC-6	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

Job ID: 180-88319-2
SDG: LF3 State Compliance

General Chemistry (Continued)

Analysis Batch: 274732 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88319-14	DUP-LF3-01	Total/NA	Water	SM 2540C	
180-88319-15	DUP-LF3-02	Total/NA	Water	SM 2540C	
180-88319-16	FB-LF3-01	Total/NA	Water	SM 2540C	
180-88319-17	FB-LF3-02	Total/NA	Water	SM 2540C	
180-88319-18	FERB-LF3-01	Total/NA	Water	SM 2540C	
180-88319-19	FERB-LF3-02	Total/NA	Water	SM 2540C	
MB 180-274732/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-274732/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-88319-9 DU	GWA-7A	Total/NA	Water	SM 2540C	
180-88319-11 DU	GWC-5	Total/NA	Water	SM 2540C	

Chain of Custody Record

Client Information		Lab P/V		Carrier Tracking (Ref's)									
Ms. Lauren Petty Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417 (Tel) Email: lmpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site:		Jake A. Lauren C. Johnnie N E-Mail: veronica.bortot@testamericainc.com Phone: 404-592-0094		Bortot, Veronica veronica.bortot@testamericainc.com									
Due Date Requested:		Analysis Requested		Total Number of Containers									
TAT Requested (days): Standard													
PO #	SCS-10347656												
WO #													
Project #	18019950												
SSOW#													
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Preservation Code	Matrix (Water, Urine, Spine, Urine, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	603 - B, Ca	TD5, 300 ORGFM, 250 chloride, fluoride, sulfate	Method of Shipment	Received by	Date/Time	Company
GWA-4	3/28/19	0950	G	W	Water	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-2B	3/28/19	1005	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-3B	3/28/19	1105	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-1	3/28/19	1110	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-7	3/28/19	1210	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-7-Filtered	3/28/19	1205	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-3	3/28/19	1250	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-3A	3/28/19	1255	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-7A	3/28/19	1300	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-2	3/28/19	1420	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
GWA-5	3/28/19	1420	G	W	W	N	N	X	X		Reddy	3/28/19 1900	Company
Possible Hazard Identification: <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)													
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____													
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____													



Chain of Custody Record

Client Information		Sample: Lab PW Bortot, Veronica								
Client Contact Ms. Lauren Petty Southern Company		Phone: 404-666-0099 E-Mail: veronica.bortot@testamericainc.com								
Address: PO BOX 2641 GSCB Birmingham State, Zip AL 35291		Carrier Tracking Note:								
Phone: 205-992-5417 (Tel) Email: lrpetty@southernco.com		Analysis Requested								
Project Name CCR - Plant McIntosh Landfill #3 Site:		Due Date Requested: TAT Requested (days): Standard								
Project # 18019950 SSOW#		PO # SCS:10347656 WO #								
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Sediment, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8020 - B, C, D, N	TDS, 300, DRP, F, M, 282 Chloride, Fluoride, Sulfate	Preservation Codes:	Special Instructions/Note:
GWC-4A	3/28/19	1435	G	Water	N	N	X	X	M - Hexane N - None O - Acetate P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
GWC-6	3/28/19	1440	G	W	N	N	X	X		2
DUP-LF3-01	3/28/19		G	W	N	N	X	X		2
DUP-LF3-02	3/28/19		G	W	N	N	X	X		2
FB-LF3-01	3/28/19	1500	G	W	N	N	X	X		2
FB-LF3-02	3/28/19	1505	G	W	N	N	X	X		2
FERB-LF3-01	3/28/19	1510	G	W	N	N	X	X		2
FERB-LF3-02	3/28/19	1515	G	W	N	N	X	X		2
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: _____ Date: _____ Time: _____ Method of Shipment: _____										
Relinquished by: _____ Date/Time: 3/28/19 1900 Company: GEI										
Relinquished by: _____ Date/Time: _____ Company: _____										
Relinquished by: _____ Date/Time: _____ Company: _____										
Custody Seals Intact: _____ Custody Seal No.: _____ Δ Yes Δ No										



Chain of Custody Record

Client Information		Sampler Jake A. Lauren C. Johnnie N		Lab PM Bortot, Veronica	
Client Contact Lauren Petty		Phone 404-5920094		E-Mail veronica.bortot@testamericainc.com	
Company Southern Company		Address PO BOX 2641 GSC8		City Birmingham	
State, Zip AL, 35291		Phone 205-992-5417(Tel)		Email lmpetty@southernco.com	
Project Name CCR - Plant McIntosh Landfill #3		Site		Due Date Requested	
TAT Requested (days)		Standard		Analysis Requested	
PO # SCS10347656		Sample Date		Sample Time	
WO #		Sample Type (C=Comp, G=grab)		Preservation Code	
Matrix (W=Water, B=Soil, O=Other)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
6020 - Ba, B, Ba, Ca, Cr, Co, Cu, Pb, V, Zn		ID		N	
TDS, 300_ORGM, 250 chloride, fluoride, sulfate		X		N	
Special Instructions/Note		Total Number of con		State Compliance Event	
Other:		2		Send results to lcocker@geiconsultants.com	
GNC-HA		3/28/19 1435		G	
GNC-V		3/28/19 1440		G	
DUP-LF3-01		3/28/19		G	
DUP-LF3-02		3/28/19		G	
FB-LF3-01		3/28/19 1500		G	
FB-LF3-02		3/28/19 1505		G	
FERB-LF3-01		3/28/19 1510		G	
FERB-LF3-02		3/28/19 1515		G	
Possible Hazard Identification		Poison B		Radiological	
Non-Hazard		Flammable		Skin Irritant	
Deliverable Requested I, II, III, IV, Other (specify)		Unknown		Empty Kit Relinquished by	
Retiquished by		Date		Time	
Retiquished by		3/28/19 1946		Company GEI	
Retiquished by		Date/Time		Company	
Retiquished by		Date/Time		Company	
Custody Seals Intact		Custody Seal No.		Received by	
Δ Yes Δ No				Received by	
				Received by	
				Received by	
				Cooler Temperature(s) °C and Other Remarks	



Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417 (Tel) Email: Impetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site:		Sampler: Jake A. Lauren C. Johnnie N Lab PM: Bortol, Veronica Phone: 404-532-0096 E-Mail: veronica.bortol@testamericainc.com		Carrier Tracking No(s): Page 1 of 2 Job #		COC No:	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #:		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Z - other (specify)	
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air) Preservation Code:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) TDS, 300_ORGFM_25D chloride, Fluoride, Sulfate 6020 - B, Ca Total Number of containers		Special Instructions/Note: Detection Event send results to 100kcr@geiconsultants.com		Special Instructions/Note: Detection Event send results to 100kcr@geiconsultants.com	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:		Method of Shipment:	
Empty Kit Relinquished by:		Date: 3/28/19 1900 Company: GEI		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:	
Relinquished by:		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:	
Relinquished by:		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:	
Relinquished by:		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:		Date/Time: 3/28/19 1900 Company:	
Custody Seals Intact Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:	



Chain of Custody Record

Client Information Client Contact: Ms. Lauren Petty Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-5417(Tel) Email: lmpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site:		Sampler: Jake A. Lauren C. Johnnie N Lab PM: Bortot, Veronica Phone: 404-692-0699 E-Mail: veronica.bortot@testamericainc.com		Carrier Tracking No(s): Page 2 of 2 Job #	
Due Date Requested: TAT Requested (days): Standard PO #: SCS10347656 WO #: Project #: 18019950 SSOW#:		Analysis Requested			
Sample Identification GWC-4A GWC-6 DUP-LF3-01 DUP-LF3-02 FB-LF3-01 FB-LF3-02 FERB-LF3-01 FERB-LF3-02		Sample Date 3/28/19 1435 3/28/19 1440 3/28/19 3/28/19 3/28/19 1500 3/28/19 1505 3/28/19 1510 3/28/19 1515		Sample Type (C=Comp, G=grab) G G G G G G G	
Matrix (W=water, S=solid, O=waste/soil, BT=tissue, L=air) Water W W W W W W W		Field Filtered Sample (Yes or No) N N N N N N N N		Perform MS/MSD (Yes or No) N N N N N N N N	
Preservation Code: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSC4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Special Instructions/Note: Detection Event send results to vcoxe@pgeiconsultants.com	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify)		Return To Client <input checked="" type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months		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 Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date: 3/28/19 1900		Method of Shipment:	
Relinquished by:		Date/Time: 3/28/19 1900		Company:	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



ORIGIN ID: SAVA (770) 912-0703
LAUREN COKER

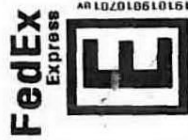
SHIP DATE: 28MAR19
ACTWT: 42.00 LB
CAD: 006994920/SSFE2002
DJMS: 24x13x15 IN
BILL THIRD PARTY

TEST AMERICA
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

TESTAMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068 REF: 0201



FRI - 29 MAR 10:30A
PRIORITY OVERNIGHT

MPS# 7863 1853 8480

Mstr# 7863 1853 8470

XH AGCA

15238

PA-US

PIT



Uncorrected temp 2.0 °C
Thermometer ID 10

CF 0 Initials TB

PT-WI-SR-001 effective 11/8/18

Company

Dept./Floor/Suite/Room

Street Address We cannot deliver to P.O. boxes or P.O. ZIP codes.

City

State

Country

© 2011 FedEx 149849 REV 7/11 RRD

ORIGIN ID: SAVA (770) 912

LAUREN COKER

TEST AMERICA

301 ALPHA DR

PITTSBURGH, PA 15238

UNITED STATES US

WE: 28MAR19
: 51.00 LB
J06994920/SSFE2002
: 24x13x15 IN

LL THIRD PARTY

TESTAMERICA
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068 REF: 0201

INVT: 0201



FRI - 29 MAR 10:30A
PRIORITY OVERNIGHT

1 of 2

TRK# 7863 1853 8470

0201

MASTER

XH AGCA

15238

PA-US

PIT

Uncorrected temp 2.8 °C
Thermometer ID 10

CF 0 Initials TB

PT-WI-SR-001 effective 11/8/18



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Bortot, Veronica		Carrier Tracking No(s): 180-359055.1					
Client Contact: Shipping/Receiving		Phone: veronica.bortot@testamericainc.com		State of Origin: Georgia					
Company: TestAmerica Laboratories, Inc.		E-Mail: veronica.bortot@testamericainc.com		Page: Page 1 of 3					
Address: 3355 McLemore Drive, Pensacola, FL, 32514		Accreditations Required (See note):		Job #: 180-88319-2					
City: Pensacola		Due Date Requested: 4/10/2019		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OHS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - DI Water W - pH 4-5 X - EDTA Y - Other (specify)					
State, Zip: FL, 32514		TAT Requested (days):		Other:					
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		PO #:							
Email:		WO #:							
Project Name: CCR - Plant McIntosh Ash Landfill #3		Project #: 18019950							
Site:		SSOW#:							
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Solid, O=Soil, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
GWA-4 (180-88319-1)	3/28/19	09:50 Eastern	Water	Water	X	X		1	
GWA-2B (180-88319-2)	3/28/19	10:05 Eastern	Water	Water	X	X		1	
GWA-3B (180-88319-3)	3/28/19	11:05 Eastern	Water	Water	X	X		1	
GWC-1 (180-88319-4)	3/28/19	11:10 Eastern	Water	Water	X	X		1	
GWA-7 (180-88319-5)	3/28/19	12:10 Eastern	Water	Water	X	X		1	
GWA-7-FILTERED (180-88319-6)	3/28/19	12:05 Eastern	Water	Water	X	X		1	
GWC-3 (180-88319-7)	3/28/19	12:50 Eastern	Water	Water	X	X		1	
GWA-3A (180-88319-8)	3/28/19	12:55 Eastern	Water	Water	X	X		1	
GWA-7A (180-88319-9)	3/28/19	13:20 Eastern	Water	Water	X	X		1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____
Relinquished by: *SMR* Date: *3/28/19 1700*
Relinquished by: _____ Date/Time: _____
Relinquished by: _____ Date/Time: _____

Received by: *Kathy Owens* Date/Time: *4-4-19 853* Company: *TA*
Received by: _____ Date/Time: _____ Company: _____
Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: *5.0°C FR 8*

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:



Chain of Custody Record

Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Sampler: Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com State of Origin: Georgia Accreditations Required (See note):		GOC No: 180-359055.2 Page: Page 2 of 3 Job #: 180-88319-2		Carrier Tracking No(s): 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:		Analysis Requested Total Number of Containers		Special Instructions/Note:	
Due Date Requested: 4/10/2019 TAT Requested (days):		Field Filled Sample (Yes or No)		Matrix (W=water, S=solid, O=swab, BT=tissue, A=air)		Sample Type (C=Comp, G=grab)		Sample Time		Sample Date	
PO #: WD #: Project #: 18019950 SOW#:		Perform MS/MSD (Yes or No)		Preservation Code:		Eastern		Eastern		Eastern	
Project Name: CCR - Plant McIntosh Ash Landfill #3 Site:		6020/3005A Ba Be Cr Co Cu Pb V Zn B Ca		Water		14:20 Eastern		3/28/19		3/28/19	
		X		Water		14:20 Eastern		3/28/19		3/28/19	
		X		Water		14:35 Eastern		3/28/19		3/28/19	
		X		Water		14:40 Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water		Eastern		3/28/19		3/28/19	
		X		Water							

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler: Lab PM: Bortot, Veronica		Camer Tracking No(s):		COC No: 180-359055.3	
Client Contact: Shipping/Receiving		Phone: E-Mail: veronica.bortot@testamericainc.com		State of Origin: Georgia		Page: Page 3 of 3	
Company: TestAmerica Laboratories, Inc.		Address: 3355 McLemore Drive, Pensacola, FL, 32514		Accreditations Required (See note):		Job #: 180-88319-2	
Due Date Requested: 4/10/2019		TAT Requested (days):		Analysis Requested		Preservation Codes:	
PO #:		WO #:		Perform MS/MSD (Yes or No) 6020/3005A Ba Be Cr Co Cu Pb V Zn B Ca		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:	
Project #: 18019950		Project Name: CCR - Plant McIntosh Ash Landfill #3		Field Filtered Sample (Yes or No)		M - Hexane N - None O - AsNaO2 P - Na2OHS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
SSOW#:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Date: 3/28/19		Sample Time: 15:15 Eastern		Sample Type: Water		Matrix (W=water, S=solid, O=wastewat, BT=TISSUE, A=Air)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type	
FERB-LF3-02 (180-88319-19)		3/28/19		15:15 Eastern		Water	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers		Special Instructions/Note:	
X		X		1			
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody.</p>							
<p>Possible Hazard Identification</p> <p>Unconfirmed</p> <p>Deliverable Requested: I, II, III, IV, Other (specify)</p> <p>Primary Deliverable Rank: 2</p> <p>Empty Kit Relinquished by:</p> <p>Relinquished by: <i>[Signature]</i> Date: 4/2/19 17:00</p> <p>Relinquished by: <i>[Signature]</i> Date/Time: 4/2/19 17:00</p> <p>Relinquished by: <i>[Signature]</i> Date/Time: 4/2/19 17:00</p> <p>Relinquished by: <i>[Signature]</i> Date/Time: 4/2/19 17:00</p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Custody Seal No.:</p>							
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p> <p>Time: _____ Method of Shipment:</p> <p>Received by: <i>[Signature]</i> Date/Time: 4-4-19 853</p> <p>Received by: <i>[Signature]</i> Date/Time: _____</p> <p>Received by: <i>[Signature]</i> Date/Time: _____</p> <p>Company: <i>[Signature]</i> Company: <i>[Signature]</i> Company: <i>[Signature]</i></p> <p>Cooler Temperature(s) °C and Other Remarks:</p>							



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88319-2
SDG Number: LF3 State Compliance

Login Number: 88319

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

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	
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.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88319-2
SDG Number: LF3 State Compliance

Login Number: 88319
List Number: 2
Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola
List Creation: 04/04/19 05:22 PM

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.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0°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	



Site: Georgia Power Plant, Landfill 3 Compliance
Laboratory: Test America, Pittsburgh, PA and Pensacola, FL
Report Nos.: 180-88319-2 and 180-88221-2
Reviewer: Lorie MacKinnon/GEI Consultants
Date: May 31, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
GWA-4	180-88319-01	Metals, Anions, TDS
GWA-2B	180-88319-02	Metals, Anions, TDS
GWA-3B	180-88319-03	Metals, Anions, TDS
GWC-1	180-88319-04	Metals, Anions, TDS
GWA-7	180-88319-05	Metals, Anions, TDS
GWA-7 Filtered	180-88319-06	Metals, Anions, TDS
GWC-3	180-88319-07	Metals, Anions, TDS
GWA-3A	180-88319-08	Metals, Anions, TDS
GWA-7A	180-88319-09	Metals, Anions, TDS
GWC-2	180-88319-10	Metals, Anions, TDS
GWC-5	180-88319-11	Metals, Anions, TDS
GWC-4A	180-88319-12	Metals, Anions, TDS
GWC-6	180-88319-13	Metals, Anions, TDS
DUP-LF3-01	180-88319-14	Metals, Anions, TDS
DUP-LF3-02	180-88319-15	Metals, Anions, TDS
FB-LF3-01	180-88319-16	Metals, Anions, TDS
FB-LF3-02	180-88319-17	Metals, Anions, TDS
FERB-LF3-01	180-88319-18	Metals, Anions, TDS
FERB-LF3-02	180-88319-19	Metals, Anions, TDS
GWA-2A	180-88221-01	Metals, Anions, TDS
GWA-1A	180-88221-02	Metals, Anions, TDS
GWA-5	180-88221-03	Metals, Anions, TDS

QC Samples:

Field/Equipment blanks: FB-LF3-01, FB-LF3-02, FERB-LF3-01, FERB-LF3-02
 Field Duplicate pairs: GWC-1/DUP-LF3-01 and GWC-2/DUP-LF3-02

The above-listed aqueous samples, equipment blanks, and field blank samples were collected on March 27 and 28, 2019 and were analyzed for select total recoverable metals by SW-846 method 6020, total dissolved solids (TDS) by Standard Methods SM 2540C, and anions (chloride, fluoride, and sulfate) by EPA method 300. The data were reviewed based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review, January 2017 (USEPA-540-R-2017-001), as well as by the methods referenced and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Laboratory and Field Blanks
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Field Duplicate Results
- Quantitation Limits

All results are usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

The validation findings were based on the following information.

Data Completeness

The level 2 (reduced deliverable) data package was complete as received by the laboratory and included sample results, method blank, MS/MSD, laboratory duplicate, and LCS results.

Holding Times and Sample Preservation

All criteria were met.

Method and Field Blanks

Field Blank Results

Low level laboratory contamination was detected in the field blanks. The following table summarizes the highest level of laboratory contamination and validation actions taken. The field blank samples were used in the evaluation of all Landfill 4 samples.

Analyte	Blank ID/ Associated Samples	Maximum Contaminant Level (mg/L)	2x Action Level (mg/L)	10x Action Level (mg/L)	Validation Actions
Vanadium	FB-LF3-01, FB-LF3-02, FERB-LF3- 01, FERB- LF3-02: All Landfill 3 samples	0.0054	0.0108	0.054	Qualify results for vanadium in samples GWC-1 and GWA-2A as nondetect (U) at the RL. Qualify results for vanadium in samples GWA-3B, GWA-7, GWA-7-Filtered, GWC-3, GWA-3A, GWA-7A, GWC-2, GWC-5, GWC-6, DUP-LF3-01, DUP-LF3-02, GWA-1A, and GWA-5 as nondetect (U) at the reported values.

Blank Actions:

If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.
 If the sample result is \geq RL and <2x contamination detected; report the result as nondetect (U) at the reported value.
 If the sample result is \geq RL and <10x Action Level; report the sample result as estimated (J); biased high.
 If the sample result is nondetect or > 10x Action Level; validation action is not required.

Laboratory Blank Results

Contamination was not detected in the associated method blanks.

MS/MSD Results

MS/MSD analyses were performed on samples GWA-4, GWC-4A, and GWA-5 for anions and samples GWA-4 and GWA-2A for metals. All criteria were met.

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on samples GWA-7A and GWC-5 for total dissolved solids. All criteria were met.

LCS Results

All criteria were met.

Field Duplicate Results

Samples GWC-1 and DUP-LF3-01 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria, except for total dissolved solids. The positive and nondetect results for total dissolved solids in samples GWC-1 and DUP-LF3-01 were qualified as estimated (J/UJ). The direction of the bias cannot be determined from this nonconformance.

Analyte	GWC-1 (mg/L)	DUP-LF3-01 (mg/L)	RPD (%)
Chloride	4.1	4.1	0
Sulfate	0.67 J	0.71 J	5.8
Barium	0.014	0.014	0
Calcium	0.15 J	0.16 J	6.5
Boron	0.021 J	0.050 U	NC, Within the RL
Total Dissolved Solids	25	10 U	NC, Not within the RL
NC – Not calculable Criteria: When both results are $\geq 5x$ the RL, RPDs must be <30%. When results are < 5x the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate >RL.			

Site: Georgia Power Plant, Landfill 3 State Compliance
 Report Nos.: 180-88221-2 and 180-88319-2
 Date: May 31, 2019

Samples GWC-2 and DUP-LF3-02 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria.

Analyte	GWC-2 (mg/L)	DUP-LF3-02 (mg/L)	RPD (%)
Chloride	4.6	4.7	2.2
Sulfate	1.0 U	0.43 J	NC, Within the RL
Barium	0.064	0.064	0
Calcium	4.9	4.7	4.2
Boron	0.062	0.042 J	38.5, Within the RL
Cobalt	0.00072 J	0.00076 J	5.4
Chromium	0.0049	0.0047	4.2
Zinc	0.0069 J	0.020 U	NC, Within the RL
Total Dissolved Solids	45	34	27.8
NC – Not calculable			
Criteria: When both results are $\geq 5x$ the RL, RPDs must be $< 30\%$.			
When results are $< 5x$ the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate $> RL$.			

Quantitation Limits

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL). These results were qualified as estimated (J) by the laboratory.

DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- NJ - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

Georgia Power Company
2019 Annual Groundwater Monitoring and Corrective Action
Report
Plant McIntosh Inactive Landfill No. 3
Permit No. 051-008D(L)(I)
August 2019

Appendix C1

Sanitas™ Outputs for Appendix III Parameters - January 2019

Interwell Prediction Limit - Significant Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/11/2019, 6:54 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Total Dissolved Solids...	GWC-5	126.6	n/a	1/31/2019	180	Yes	65	1.538	sqrt(x)	0.001462	Param 1 of 2

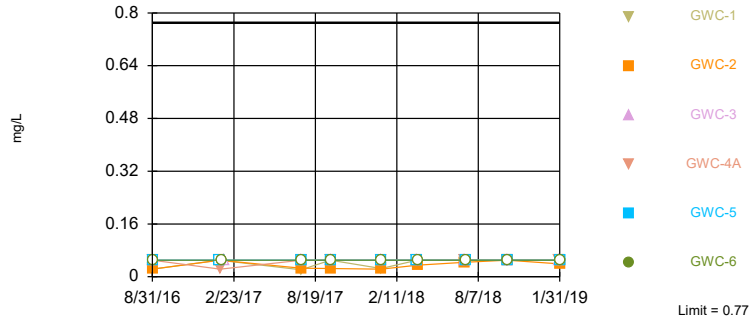
Interwell Prediction Limit - All Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/11/2019, 6:54 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	GWC-1	0.77	n/a	1/30/2019	0.05ND	No	66	72.73	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-2	0.77	n/a	1/31/2019	0.039	No	66	72.73	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-3	0.77	n/a	1/30/2019	0.05ND	No	66	72.73	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-4A	0.77	n/a	1/30/2019	0.05ND	No	66	72.73	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-5	0.77	n/a	1/31/2019	0.05ND	No	66	72.73	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-6	0.77	n/a	1/31/2019	0.05ND	No	66	72.73	n/a	0.000...	NP (NDs) 1 of 2
Calcium (mg/L)	GWC-1	17	n/a	1/30/2019	0.225	No	65	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-2	17	n/a	1/31/2019	4.65	No	65	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-3	17	n/a	1/30/2019	2	No	65	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-4A	17	n/a	1/30/2019	0.34	No	65	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-5	17	n/a	1/31/2019	7.5	No	65	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-6	17	n/a	1/31/2019	1.9	No	65	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-1	16.98	n/a	1/30/2019	4.85	No	66	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-2	16.98	n/a	1/31/2019	5.2	No	66	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-3	16.98	n/a	1/30/2019	10	No	66	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-4A	16.98	n/a	1/30/2019	12	No	66	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-5	16.98	n/a	1/31/2019	8	No	66	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-6	16.98	n/a	1/31/2019	8.5	No	66	0	x^(1/3)	0.001462	Param 1 of 2
Fluoride (mg/L)	GWC-1	0.21	n/a	1/30/2019	0.2ND	No	66	81.82	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-2	0.21	n/a	1/31/2019	0.113	No	66	81.82	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-3	0.21	n/a	1/30/2019	0.2ND	No	66	81.82	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-4A	0.21	n/a	1/30/2019	0.2ND	No	66	81.82	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-5	0.21	n/a	1/31/2019	0.063	No	66	81.82	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-6	0.21	n/a	1/31/2019	0.2ND	No	66	81.82	n/a	0.000...	NP (NDs) 1 of 2
pH (S.U.)	GWC-1	5.956	4.038	1/30/2019	4.81	No	200	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-2	5.956	4.038	1/31/2019	5.38	No	200	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-3	5.956	4.038	1/30/2019	4.91	No	200	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-4A	5.956	4.038	1/30/2019	4.52	No	200	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-5	5.956	4.038	1/31/2019	5.69	No	200	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-6	5.956	4.038	1/31/2019	4.52	No	200	0	No	0.000...	Param 1 of 2
Sulfate (mg/L)	GWC-1	74	n/a	1/30/2019	0.66	No	66	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-2	74	n/a	1/31/2019	0.525	No	66	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-3	74	n/a	1/30/2019	1ND	No	66	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-4A	74	n/a	1/30/2019	0.9	No	66	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-5	74	n/a	1/31/2019	4.8	No	66	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-6	74	n/a	1/31/2019	0.86	No	66	50	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids...	GWC-1	126.6	n/a	1/30/2019	29	No	65	1.538	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-2	126.6	n/a	1/31/2019	45	No	65	1.538	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-3	126.6	n/a	1/30/2019	33	No	65	1.538	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-4A	126.6	n/a	1/30/2019	37	No	65	1.538	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-5	126.6	n/a	1/31/2019	180	Yes	65	1.538	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-6	126.6	n/a	1/31/2019	84	No	65	1.538	sqrt(x)	0.001462	Param 1 of 2

Within Limit

Prediction Limit
Interwell Non-parametric

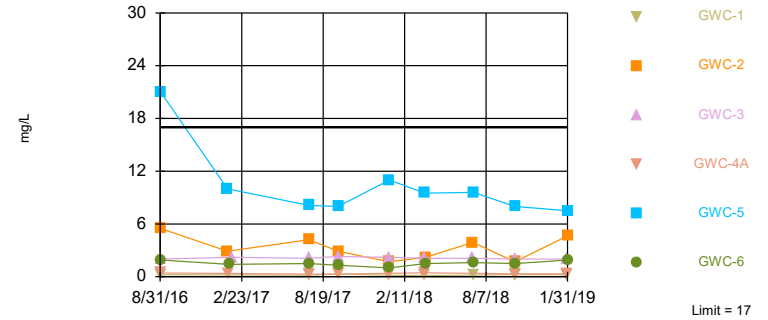


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 66 background values. 72.73% NDs. Annual per-constituent alpha = 0.00528. Individual comparison alpha = 0.0004411 (1 of 2). Comparing 6 points to limit.

Constituent: Boron Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

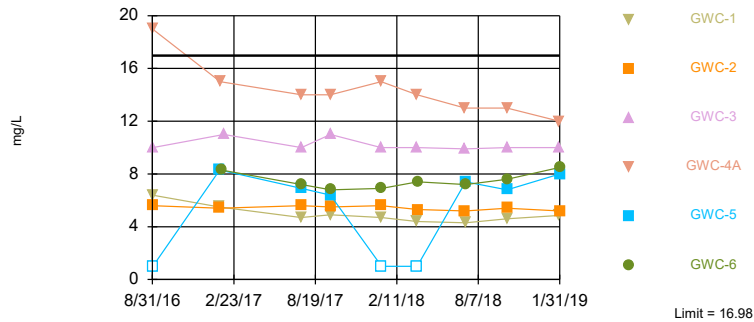


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 65 background values. Annual per-constituent alpha = 0.005441. Individual comparison alpha = 0.0004546 (1 of 2). Comparing 6 points to limit.

Constituent: Calcium Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Parametric

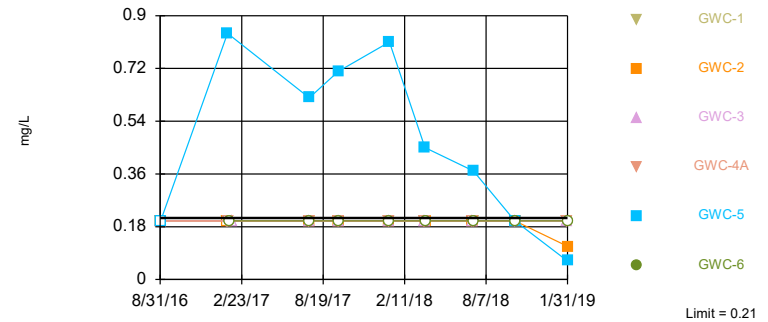


Background Data Summary (based on cube root transformation): Mean=2.012, Std. Dev.=0.3039, n=66. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9589, critical = 0.948. Kappa = 1.839 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

Constituent: Chloride Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

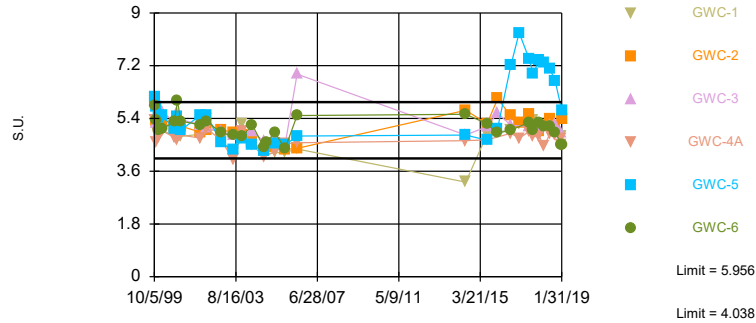


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 66 background values. 81.82% NDs. Annual per-constituent alpha = 0.00528. Individual comparison alpha = 0.0004411 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limits

Prediction Limit
Interwell Parametric

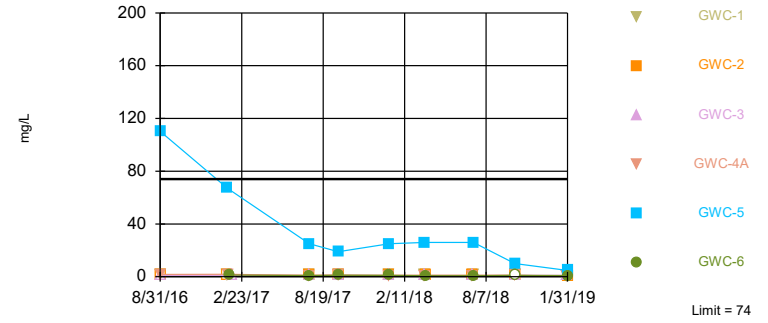


Background Data Summary: Mean=4.997, Std. Dev.=0.5359, n=200. Normality test: Chi Squared @alpha = 0.01, calculated = 14, critical = 14.07. Kappa = 1.79 (c=6, w=6, 1 of 2, event alpha = 0.05132). N exceeds UG tables; Kappa based on n=150. Report alpha = 0.008742. Individual comparison alpha = 0.0007311. Comparing 6 points to limit.

Constituent: pH Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

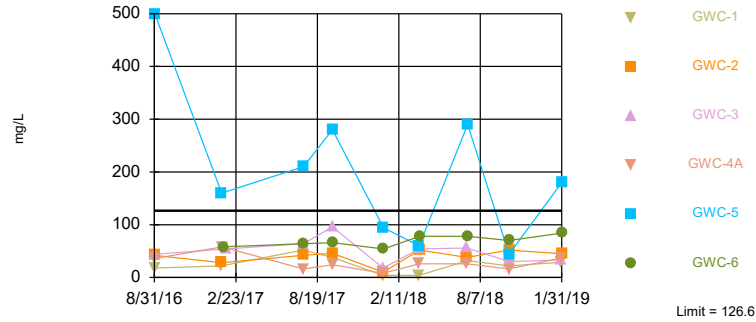


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 66 background values. 50% NDs. Annual per-constituent alpha = 0.00528. Individual comparison alpha = 0.0004411 (1 of 2). Comparing 6 points to limit.

Constituent: Sulfate Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Exceeds Limit: GWC-5

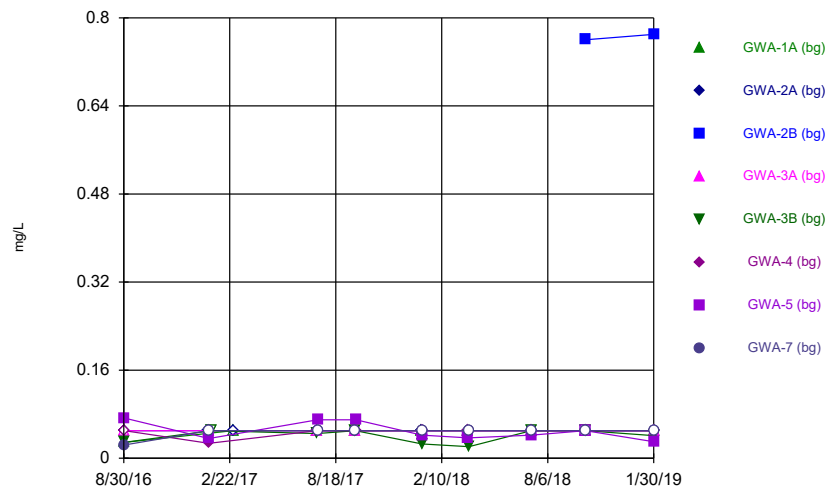
Prediction Limit
Interwell Parametric



Background Data Summary (based on square root transformation): Mean=6.977, Std. Dev.=2.324, n=65, 1.538% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9718, critical = 0.948. Kappa = 1.84 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

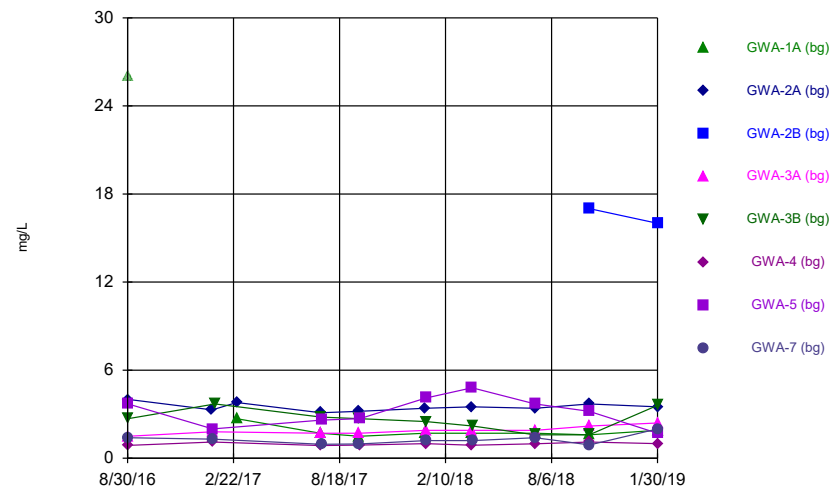
Constituent: Total Dissolved Solids Analysis Run 7/11/2019 6:48 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



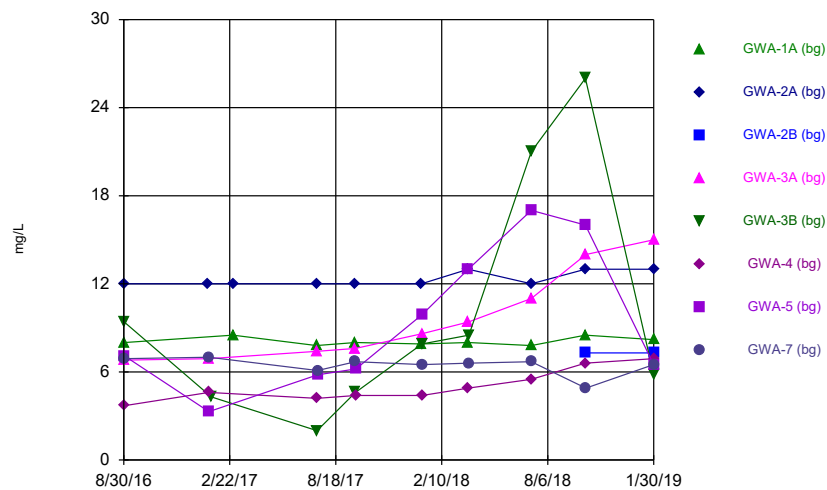
Constituent: Boron Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



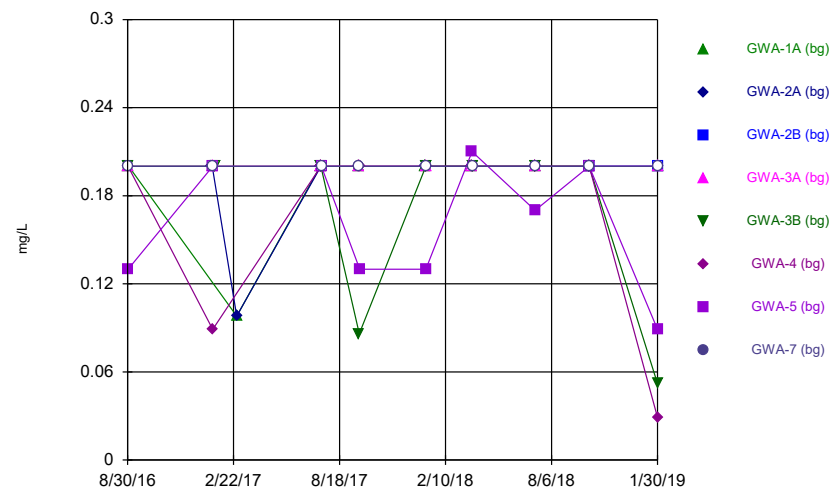
Constituent: Calcium Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



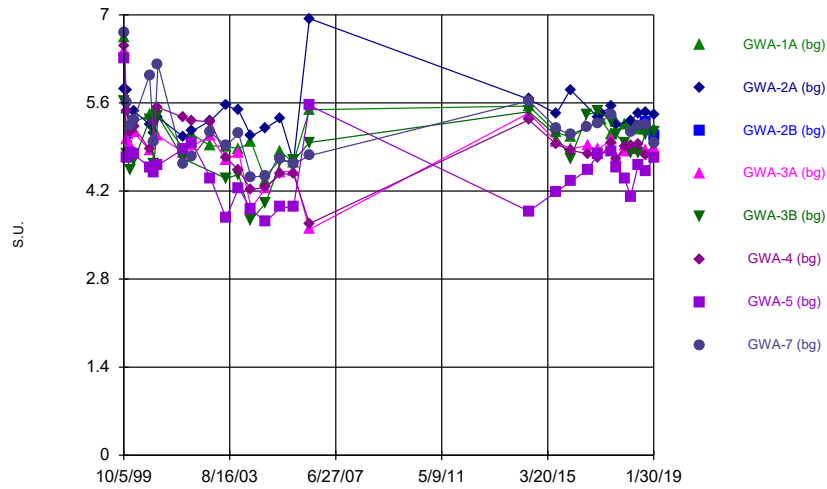
Constituent: Chloride Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Fluoride Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

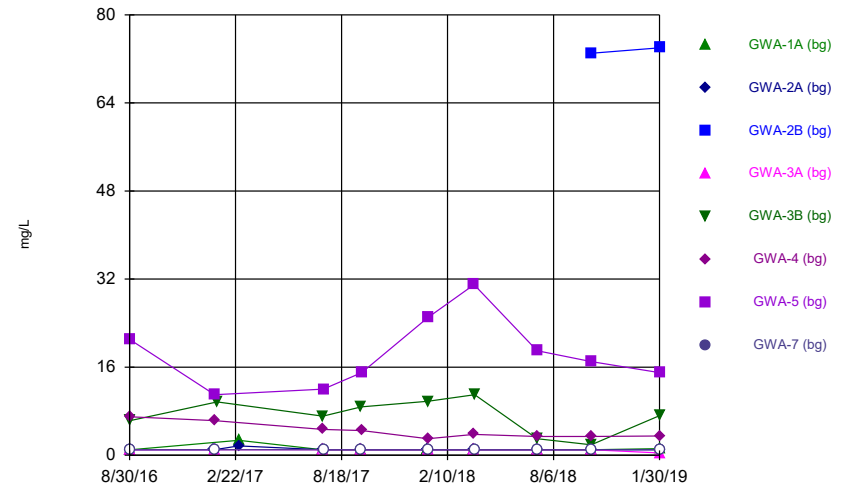
Time Series



Constituent: pH Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

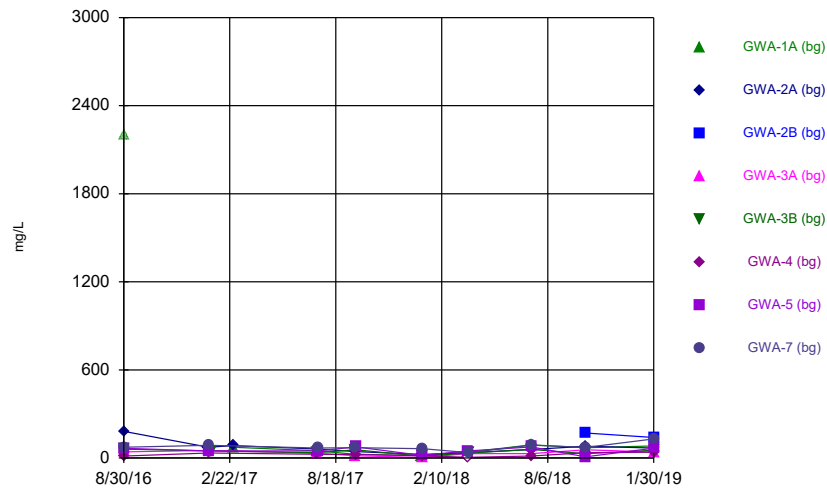
Time Series



Constituent: Sulfate Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

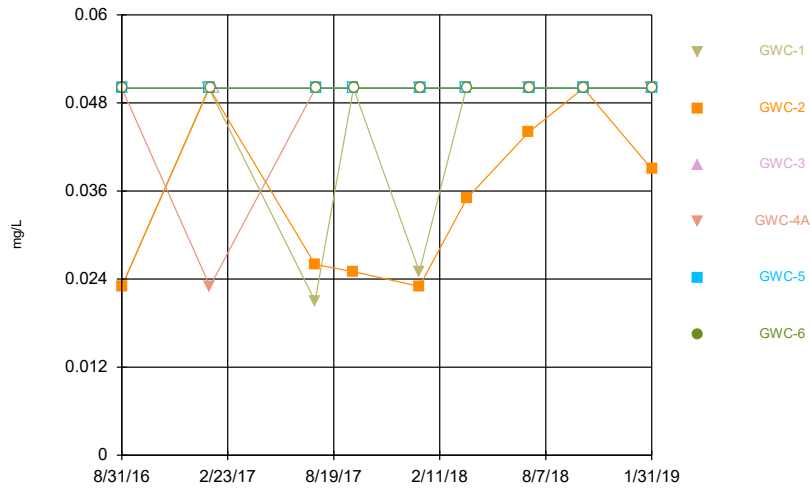
Hollow symbols indicate censored values.

Time Series



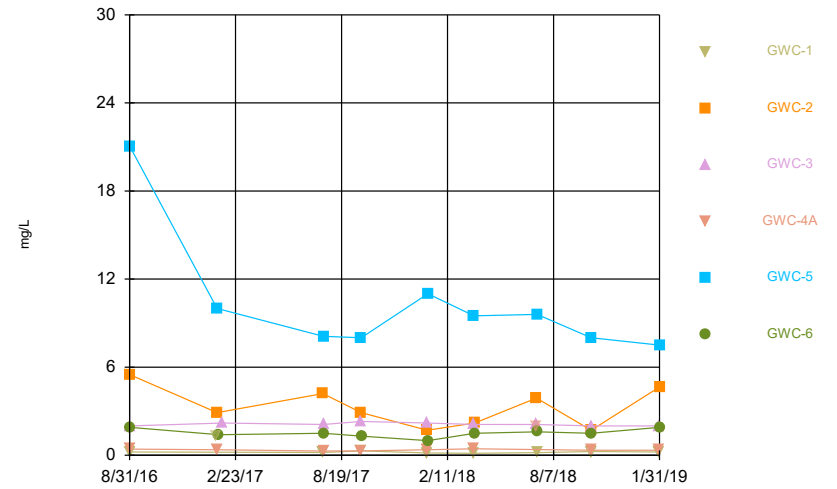
Constituent: Total Dissolved Solids Analysis Run 7/11/2019 6:56 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



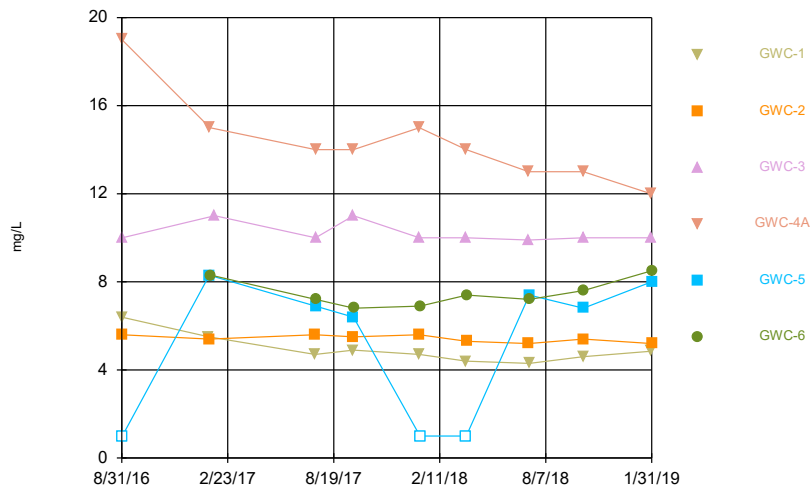
Constituent: Boron Analysis Run 7/11/2019 6:59 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



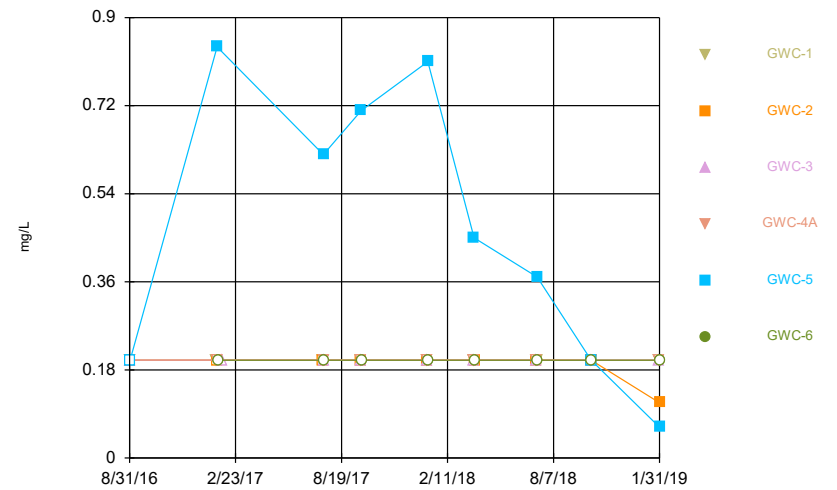
Constituent: Calcium Analysis Run 7/11/2019 6:59 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



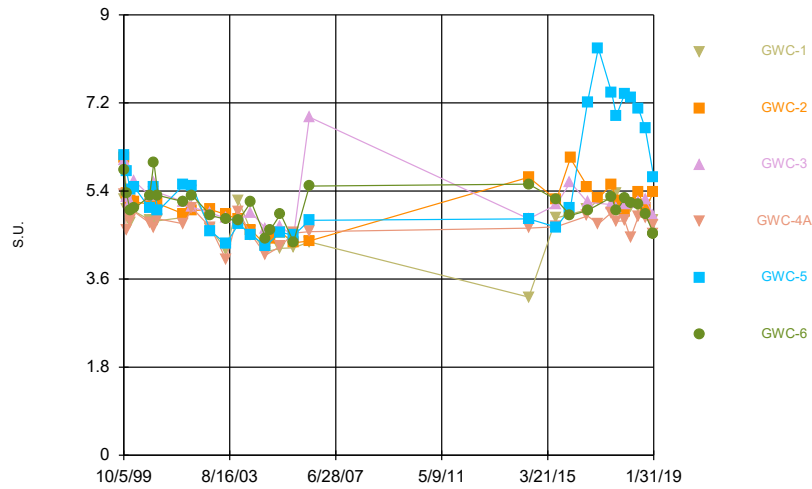
Constituent: Chloride Analysis Run 7/11/2019 6:59 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Fluoride Analysis Run 7/11/2019 6:59 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

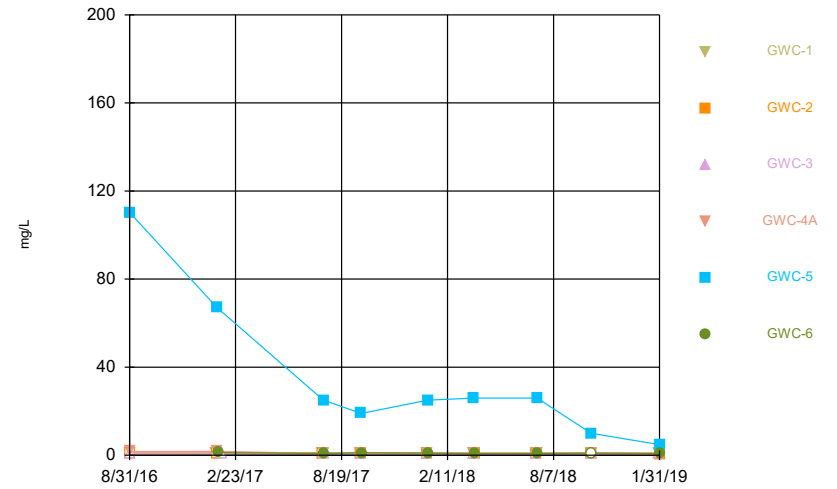
Time Series



Constituent: pH Analysis Run 7/11/2019 6:59 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

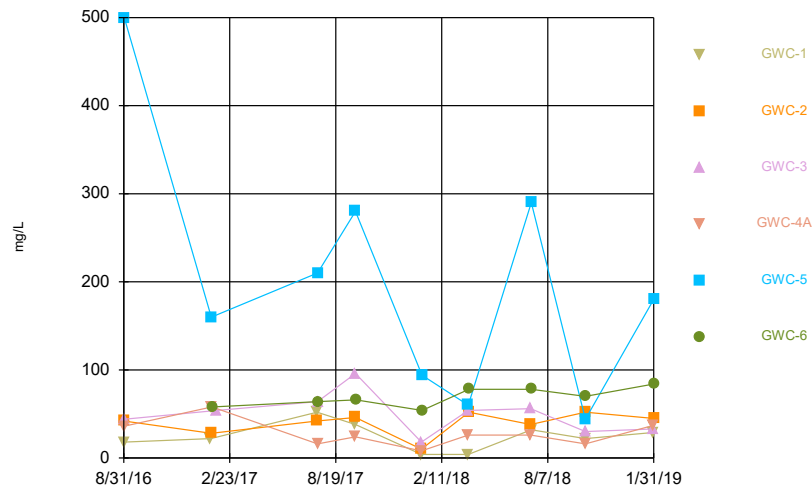
Hollow symbols indicate censored values.

Time Series



Constituent: Sulfate Analysis Run 7/11/2019 6:59 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 7/11/2019 6:59 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot - Upgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/11/2019, 6:58 PM

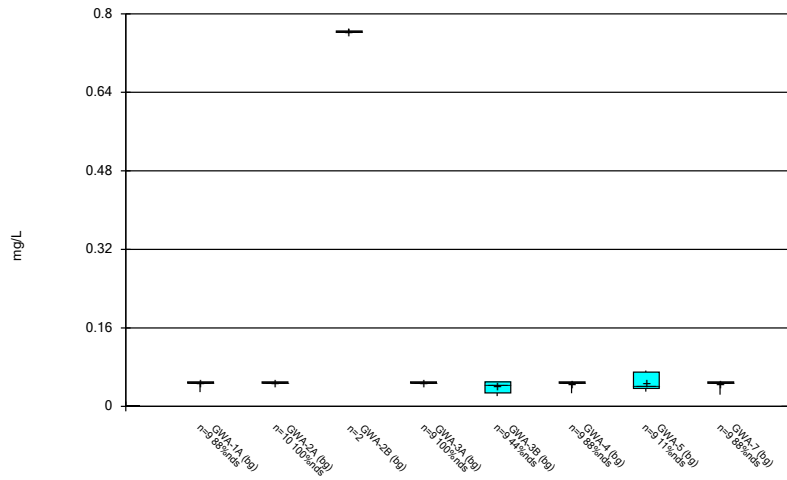
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (mg/L)	GWA-1A (bg)	9	0.04767	0.007	0.002333	0.05	0.029	0.05	88.89
Boron (mg/L)	GWA-2A (bg)	10	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWA-2B (bg)	2	0.765	0.007071	0.005	0.765	0.76	0.77	0
Boron (mg/L)	GWA-3A (bg)	9	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWA-3B (bg)	9	0.04022	0.01174	0.003915	0.045	0.021	0.05	44.44
Boron (mg/L)	GWA-4 (bg)	9	0.04744	0.007667	0.002556	0.05	0.027	0.05	88.89
Boron (mg/L)	GWA-5 (bg)	9	0.05	0.01667	0.005555	0.042	0.03	0.073	11.11
Boron (mg/L)	GWA-7 (bg)	9	0.04711	0.008667	0.002889	0.05	0.024	0.05	88.89
Calcium (mg/L)	GWA-1A (bg)	8	1.813	0.3758	0.1329	1.7	1.5	2.7	0
Calcium (mg/L)	GWA-2A (bg)	10	3.49	0.2767	0.0875	3.45	3.1	4	0
Calcium (mg/L)	GWA-2B (bg)	2	16.5	0.7071	0.5	16.5	16	17	0
Calcium (mg/L)	GWA-3A (bg)	9	1.889	0.2713	0.09044	1.9	1.5	2.4	0
Calcium (mg/L)	GWA-3B (bg)	9	2.6	0.745	0.2483	2.7	1.6	3.7	0
Calcium (mg/L)	GWA-4 (bg)	9	0.9689	0.09185	0.03062	0.99	0.86	1.1	0
Calcium (mg/L)	GWA-5 (bg)	9	3.167	1.01	0.3367	3.2	1.7	4.8	0
Calcium (mg/L)	GWA-7 (bg)	9	1.259	0.3351	0.1117	1.2	0.91	2	0
Chloride (mg/L)	GWA-1A (bg)	9	8.078	0.2682	0.08941	8	7.8	8.5	0
Chloride (mg/L)	GWA-2A (bg)	10	12.3	0.483	0.1528	12	12	13	0
Chloride (mg/L)	GWA-2B (bg)	2	7.3	0	0	7.3	7.3	7.3	0
Chloride (mg/L)	GWA-3A (bg)	9	9.633	3.072	1.024	8.6	6.8	15	0
Chloride (mg/L)	GWA-3B (bg)	9	9.944	8.119	2.706	7.9	2	26	0
Chloride (mg/L)	GWA-4 (bg)	9	5.022	1.097	0.3658	4.6	3.7	6.9	0
Chloride (mg/L)	GWA-5 (bg)	9	9.422	4.856	1.619	7.1	3.3	17	0
Chloride (mg/L)	GWA-7 (bg)	9	6.433	0.6305	0.2102	6.6	4.9	7	0
Fluoride (mg/L)	GWA-1A (bg)	9	0.1887	0.034	0.01133	0.2	0.098	0.2	88.89
Fluoride (mg/L)	GWA-2A (bg)	10	0.1898	0.03226	0.0102	0.2	0.098	0.2	90
Fluoride (mg/L)	GWA-2B (bg)	2	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWA-3A (bg)	9	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWA-3B (bg)	9	0.1709	0.05839	0.01946	0.2	0.052	0.2	77.78
Fluoride (mg/L)	GWA-4 (bg)	9	0.1687	0.06396	0.02132	0.2	0.029	0.2	77.78
Fluoride (mg/L)	GWA-5 (bg)	9	0.1621	0.04345	0.01448	0.17	0.089	0.21	33.33
Fluoride (mg/L)	GWA-7 (bg)	9	0.2	0	0	0.2	0.2	0.2	100
pH (S.U.)	GWA-1A (bg)	28	5.194	0.3948	0.07461	5.175	4.35	6.63	0
pH (S.U.)	GWA-2A (bg)	28	5.424	0.39	0.07371	5.395	4.67	6.94	0
pH (S.U.)	GWA-2B (bg)	2	5.185	0.1485	0.105	5.185	5.08	5.29	0
pH (S.U.)	GWA-3A (bg)	30	4.854	0.4626	0.08447	4.875	3.59	6.42	0
pH (S.U.)	GWA-3B (bg)	27	4.886	0.4483	0.08628	4.8	3.74	5.62	0
pH (S.U.)	GWA-4 (bg)	29	4.935	0.5117	0.09501	4.92	3.68	6.51	0
pH (S.U.)	GWA-5 (bg)	29	4.52	0.5372	0.09975	4.53	3.71	6.3	0
pH (S.U.)	GWA-7 (bg)	27	5.185	0.523	0.1007	5.13	4.42	6.71	0
Sulfate (mg/L)	GWA-1A (bg)	9	1.211	0.5622	0.1874	1	1	2.7	77.78
Sulfate (mg/L)	GWA-2A (bg)	10	1.07	0.2214	0.07	1	1	1.7	90
Sulfate (mg/L)	GWA-2B (bg)	2	73.5	0.7071	0.5	73.5	73	74	0
Sulfate (mg/L)	GWA-3A (bg)	9	0.9344	0.1967	0.06556	1	0.41	1	88.89
Sulfate (mg/L)	GWA-3B (bg)	9	7.2	3.094	1.031	7.2	1.9	11	0
Sulfate (mg/L)	GWA-4 (bg)	9	4.4	1.396	0.4655	3.8	3	7	0
Sulfate (mg/L)	GWA-5 (bg)	9	18.44	6.425	2.142	17	11	31	0
Sulfate (mg/L)	GWA-7 (bg)	9	1	0	0	1	1	1	100
Total Dissolved Solids...	GWA-1A (bg)	8	56	27.11	9.584	60	16	90	0
Total Dissolved Solids...	GWA-2A (bg)	10	71	42.9	13.57	65	24	180	0

Box & Whiskers Plot - Upgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/11/2019, 6:58 PM

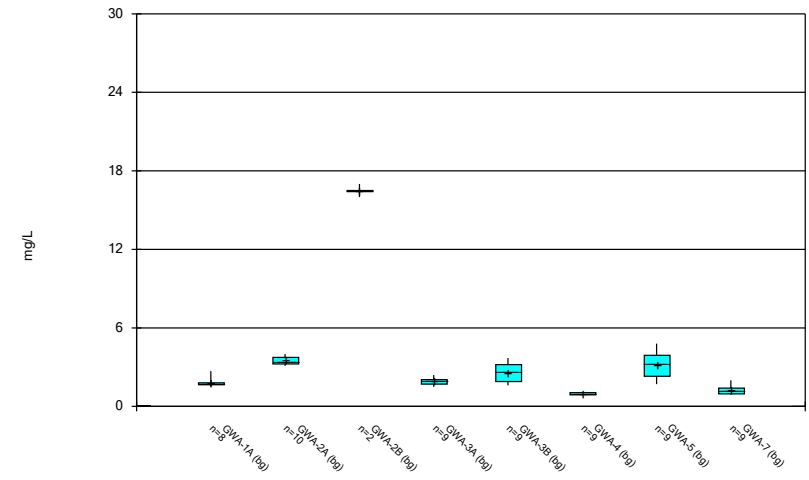
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Std. Err.</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>	<u>%NDs</u>
Total Dissolved Solids...	GWA-2B (bg)	2	155	21.21	15	155	140	170	0
Total Dissolved Solids...	GWA-3A (bg)	9	33.67	16.51	5.503	32	4	56	0
Total Dissolved Solids...	GWA-3B (bg)	9	43	16.08	5.359	48	12	60	0
Total Dissolved Solids...	GWA-4 (bg)	9	23.22	11.85	3.95	24	5	40	11.11
Total Dissolved Solids...	GWA-5 (bg)	9	50.56	24.22	8.074	48	8	76	0
Total Dissolved Solids...	GWA-7 (bg)	9	76.44	25.06	8.352	72	36	130	0

Box & Whiskers Plot



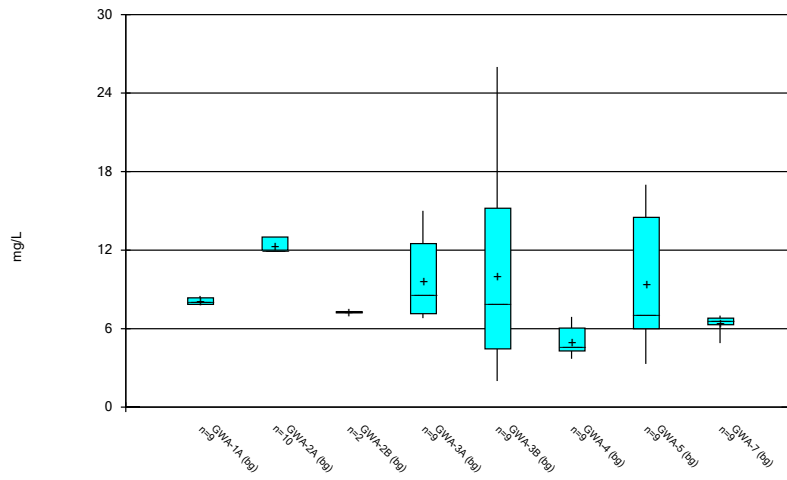
Constituent: Boron Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



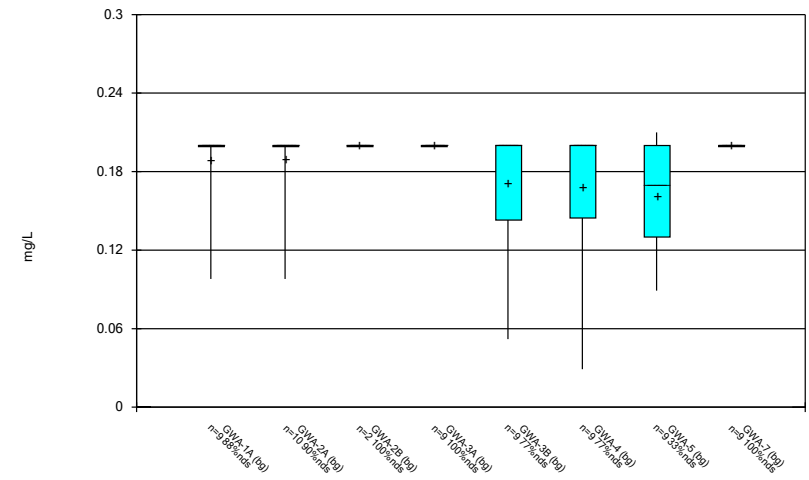
Constituent: Calcium Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



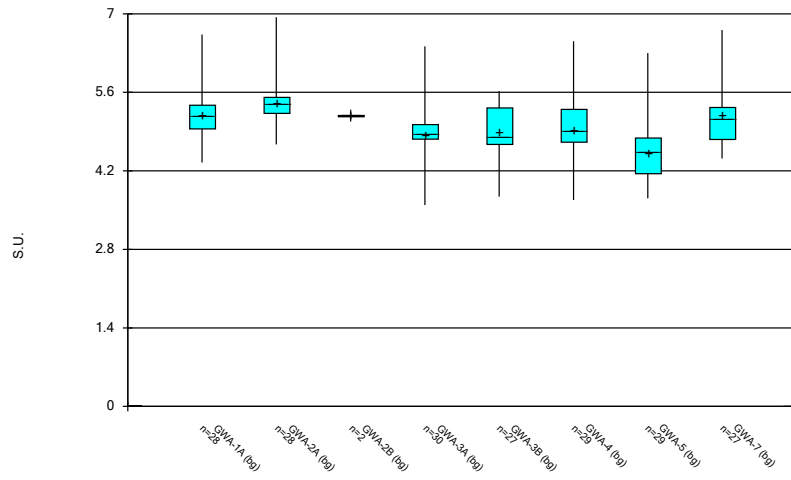
Constituent: Chloride Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



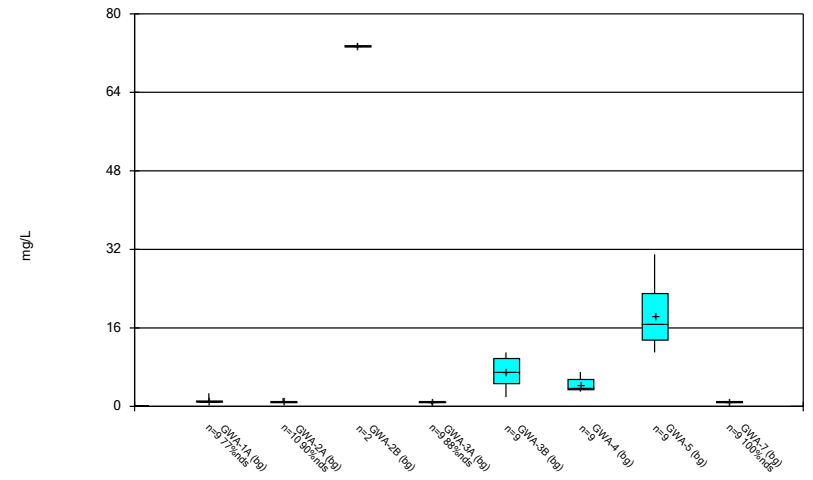
Constituent: Fluoride Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



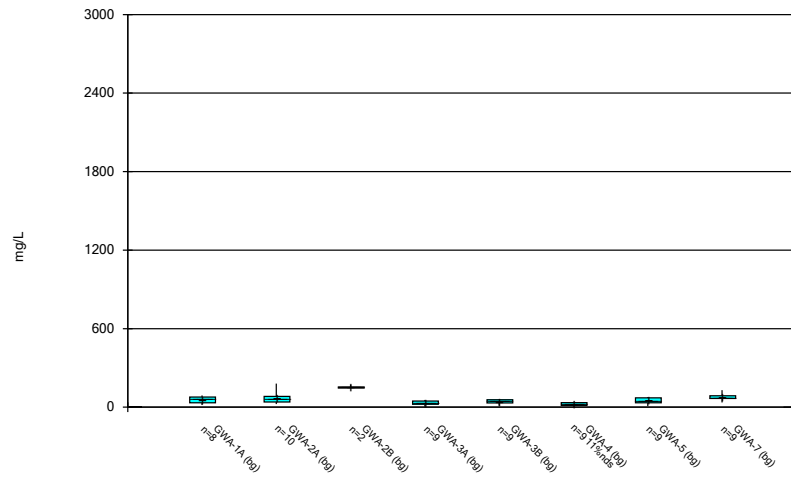
Constituent: pH Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Sulfate Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



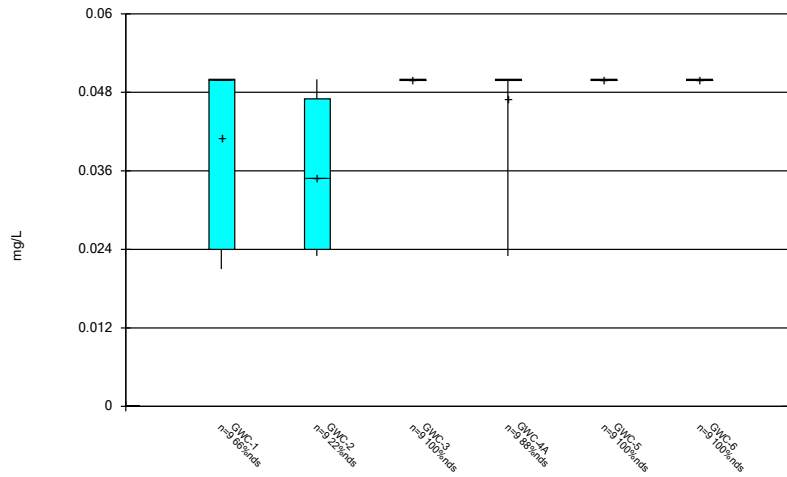
Constituent: Total Dissolved Solids Analysis Run 7/11/2019 6:57 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot - Downgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/11/2019, 7:02 PM

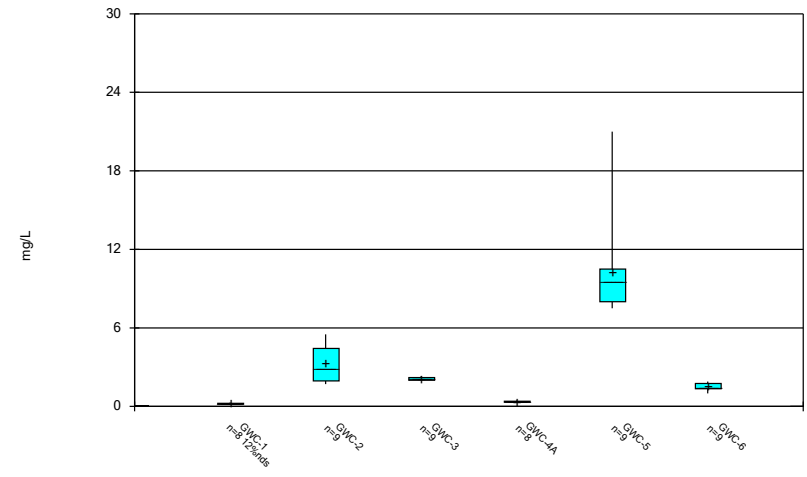
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Std. Err.</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>	<u>%NDs</u>
Boron (mg/L)	GWC-1	9	0.041	0.01354	0.004512	0.05	0.021	0.05	66.67
Boron (mg/L)	GWC-2	9	0.035	0.01127	0.003756	0.035	0.023	0.05	22.22
Boron (mg/L)	GWC-3	9	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWC-4A	9	0.047	0.009	0.003	0.05	0.023	0.05	88.89
Boron (mg/L)	GWC-5	9	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWC-6	9	0.05	0	0	0.05	0.05	0.05	100
Calcium (mg/L)	GWC-1	8	0.2081	0.05168	0.01827	0.205	0.14	0.3	12.5
Calcium (mg/L)	GWC-2	9	3.294	1.345	0.4485	2.9	1.7	5.5	0
Calcium (mg/L)	GWC-3	9	2.111	0.1054	0.03514	2.1	2	2.3	0
Calcium (mg/L)	GWC-4A	8	0.36	0.05318	0.0188	0.355	0.29	0.44	0
Calcium (mg/L)	GWC-5	9	10.3	4.175	1.392	9.5	7.5	21	0
Calcium (mg/L)	GWC-6	9	1.511	0.2804	0.09346	1.5	1	1.9	0
Chloride (mg/L)	GWC-1	9	4.928	0.6505	0.2168	4.7	4.3	6.4	0
Chloride (mg/L)	GWC-2	9	5.422	0.1641	0.05472	5.4	5.2	5.6	0
Chloride (mg/L)	GWC-3	9	10.21	0.4485	0.1495	10	9.9	11	0
Chloride (mg/L)	GWC-4A	9	14.33	2	0.6667	14	12	19	0
Chloride (mg/L)	GWC-5	9	5.2	3.204	1.068	6.8	1	8.3	33.33
Chloride (mg/L)	GWC-6	8	7.488	0.6198	0.2191	7.3	6.8	8.5	0
Fluoride (mg/L)	GWC-1	9	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWC-2	9	0.1903	0.029	0.009667	0.2	0.113	0.2	88.89
Fluoride (mg/L)	GWC-3	9	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWC-4A	9	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWC-5	9	0.4737	0.286	0.09533	0.45	0.063	0.84	22.22
Fluoride (mg/L)	GWC-6	8	0.2	0	0	0.2	0.2	0.2	100
pH (S.U.)	GWC-1	28	4.791	0.4685	0.08855	4.855	3.23	5.39	0
pH (S.U.)	GWC-2	30	5.097	0.4469	0.08158	5.145	4.29	6.08	0
pH (S.U.)	GWC-3	28	5.189	0.468	0.08843	5.145	4.47	6.91	0
pH (S.U.)	GWC-4A	29	4.696	0.2751	0.05109	4.73	4	5.33	0
pH (S.U.)	GWC-5	29	5.663	1.144	0.2125	5.48	4.28	8.32	0
pH (S.U.)	GWC-6	30	5.075	0.3804	0.06945	5.085	4.36	5.99	0
Sulfate (mg/L)	GWC-1	9	0.9622	0.1133	0.03778	1	0.66	1	88.89
Sulfate (mg/L)	GWC-2	9	0.9472	0.1583	0.05278	1	0.525	1	88.89
Sulfate (mg/L)	GWC-3	9	1	0	0	1	1	1	100
Sulfate (mg/L)	GWC-4A	9	1.074	0.3992	0.1331	0.9	0.76	1.8	11.11
Sulfate (mg/L)	GWC-5	9	34.76	33.17	11.06	25	4.8	110	0
Sulfate (mg/L)	GWC-6	8	0.9388	0.1533	0.0542	0.905	0.78	1.2	12.5
Total Dissolved Solids...	GWC-1	9	24.56	15.45	5.151	22	4	52	0
Total Dissolved Solids...	GWC-2	9	39.44	13.24	4.413	42	10	52	0
Total Dissolved Solids...	GWC-3	9	49.89	22.72	7.573	54	18	96	0
Total Dissolved Solids...	GWC-4A	9	27.44	14.81	4.936	26	8	58	0
Total Dissolved Solids...	GWC-5	9	202	142.2	47.4	180	44	500	0
Total Dissolved Solids...	GWC-6	8	69	10.47	3.703	68	54	84	0

Box & Whiskers Plot



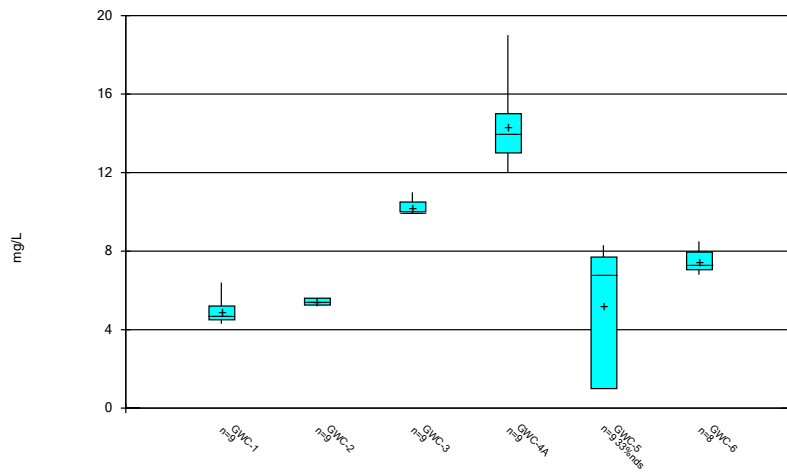
Constituent: Boron Analysis Run 7/11/2019 7:01 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



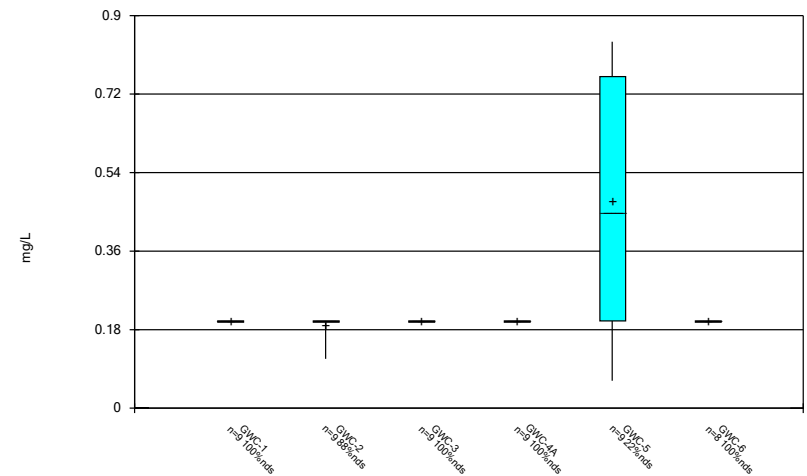
Constituent: Calcium Analysis Run 7/11/2019 7:01 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



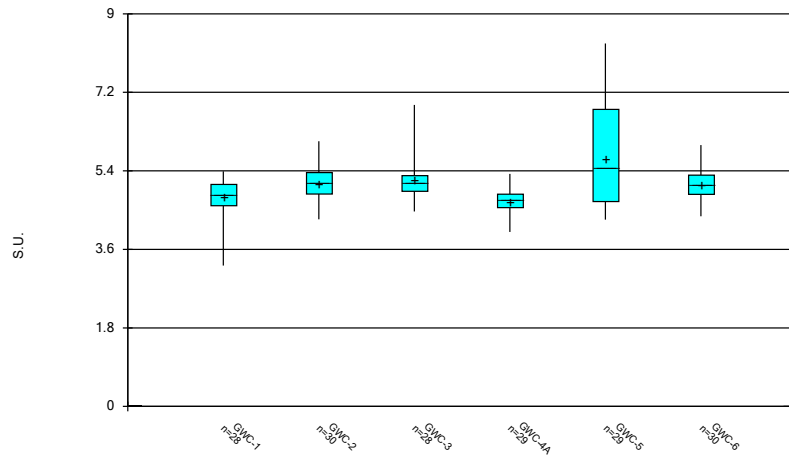
Constituent: Chloride Analysis Run 7/11/2019 7:01 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



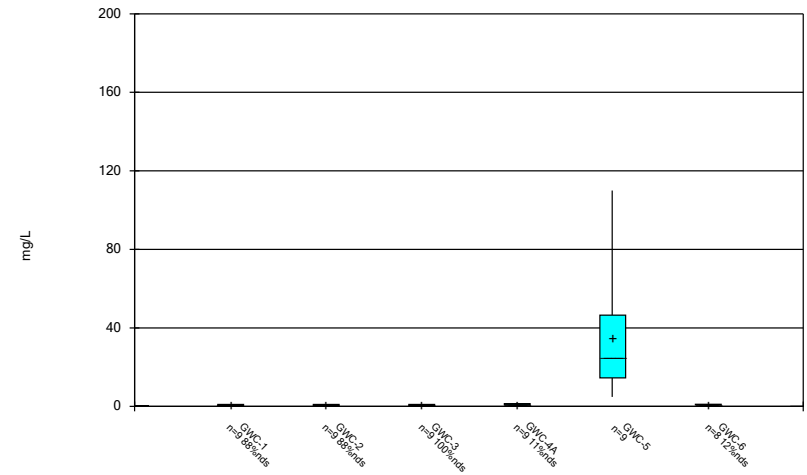
Constituent: Fluoride Analysis Run 7/11/2019 7:01 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



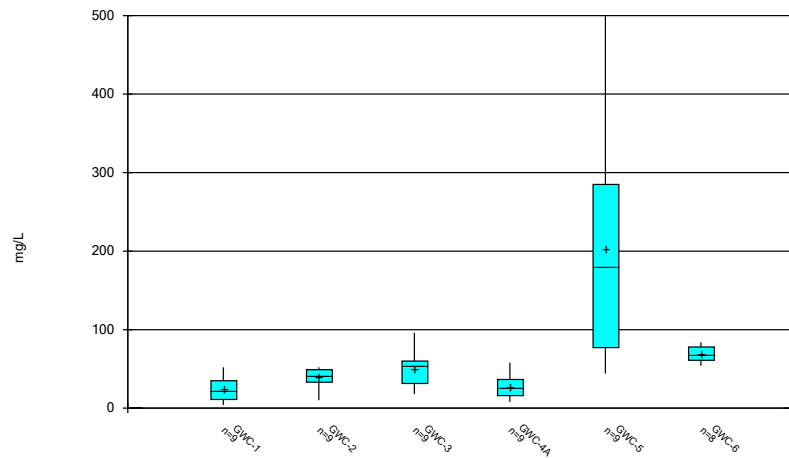
Constituent: pH Analysis Run 7/11/2019 7:01 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Sulfate Analysis Run 7/11/2019 7:01 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 7/11/2019 7:01 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Georgia Power Company
2019 Annual Groundwater Monitoring and Corrective Action
Report
Plant McIntosh Inactive Landfill No. 3
Permit No. 051-008D(L)(I)
August 2019

Appendix C2

Sanitas™ Outputs for Appendix III Parameters - March 2019

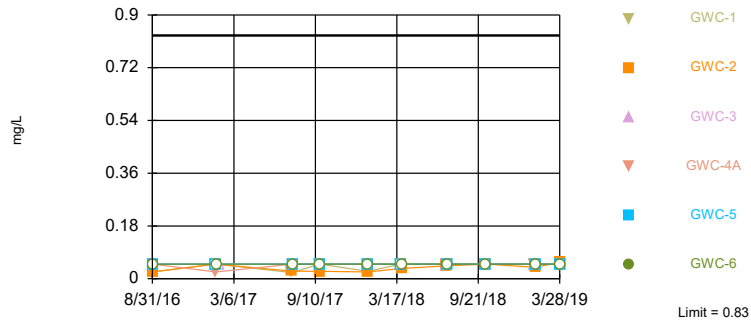
Interwell Prediction Limit

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/1/2019, 2:35 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GWC-1	0.83	n/a	3/28/2019	0.05ND	No	74	74.32	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-2	0.83	n/a	3/28/2019	0.056	No	74	74.32	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-3	0.83	n/a	3/28/2019	0.05ND	No	74	74.32	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-4A	0.83	n/a	3/28/2019	0.05ND	No	74	74.32	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-5	0.83	n/a	3/28/2019	0.05ND	No	74	74.32	n/a	0.000...	NP (NDs) 1 of 2
Boron (mg/L)	GWC-6	0.83	n/a	3/28/2019	0.05ND	No	74	74.32	n/a	0.000...	NP (NDs) 1 of 2
Calcium (mg/L)	GWC-1	17	n/a	3/28/2019	0.25ND	No	73	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-2	17	n/a	3/28/2019	4.8	No	73	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-3	17	n/a	3/28/2019	2	No	73	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-4A	17	n/a	3/28/2019	0.3	No	73	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-5	17	n/a	3/28/2019	7.2	No	73	0	n/a	0.000...	NP (normality) 1 of 2
Calcium (mg/L)	GWC-6	17	n/a	3/28/2019	1.5	No	73	0	n/a	0.000...	NP (normality) 1 of 2
Chloride (mg/L)	GWC-1	16.7	n/a	3/28/2019	4.1	No	74	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-2	16.7	n/a	3/28/2019	4.65	No	74	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-3	16.7	n/a	3/28/2019	8.8	No	74	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-4A	16.7	n/a	3/28/2019	11	No	74	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-5	16.7	n/a	3/28/2019	7.5	No	74	0	x^(1/3)	0.001462	Param 1 of 2
Chloride (mg/L)	GWC-6	16.7	n/a	3/28/2019	6.9	No	74	0	x^(1/3)	0.001462	Param 1 of 2
Fluoride (mg/L)	GWC-1	0.21	n/a	3/28/2019	0.2ND	No	74	83.78	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-2	0.21	n/a	3/28/2019	0.2ND	No	74	83.78	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-3	0.21	n/a	3/28/2019	0.2ND	No	74	83.78	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-4A	0.21	n/a	3/28/2019	0.2ND	No	74	83.78	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-5	0.21	n/a	3/28/2019	0.2ND	No	74	83.78	n/a	0.000...	NP (NDs) 1 of 2
Fluoride (mg/L)	GWC-6	0.21	n/a	3/28/2019	0.2ND	No	74	83.78	n/a	0.000...	NP (NDs) 1 of 2
pH (S.U.)	GWC-1	5.943	4.053	3/28/2019	4.99	No	208	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-2	5.943	4.053	3/28/2019	5.38	No	208	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-3	5.943	4.053	3/28/2019	5.08	No	208	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-4A	5.943	4.053	3/28/2019	4.68	No	208	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-5	5.943	4.053	3/28/2019	5.46	No	208	0	No	0.000...	Param 1 of 2
pH (S.U.)	GWC-6	5.943	4.053	3/28/2019	4.85	No	208	0	No	0.000...	Param 1 of 2
Sulfate (mg/L)	GWC-1	74	n/a	3/28/2019	1ND	No	74	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-2	74	n/a	3/28/2019	1ND	No	74	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-3	74	n/a	3/28/2019	1ND	No	74	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-4A	74	n/a	3/28/2019	1.1	No	74	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-5	74	n/a	3/28/2019	3	No	74	50	n/a	0.000...	NP (normality) 1 of 2
Sulfate (mg/L)	GWC-6	74	n/a	3/28/2019	1ND	No	74	50	n/a	0.000...	NP (normality) 1 of 2
Total Dissolved Solids...	GWC-1	127.2	n/a	3/28/2019	10ND	No	73	1.37	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-2	127.2	n/a	3/28/2019	39.5	No	73	1.37	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-3	127.2	n/a	3/28/2019	44	No	73	1.37	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-4A	127.2	n/a	3/28/2019	28	No	73	1.37	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-5	127.2	n/a	3/28/2019	110	No	73	1.37	sqrt(x)	0.001462	Param 1 of 2
Total Dissolved Solids...	GWC-6	127.2	n/a	3/28/2019	62	No	73	1.37	sqrt(x)	0.001462	Param 1 of 2

Within Limit

Prediction Limit
Interwell Non-parametric

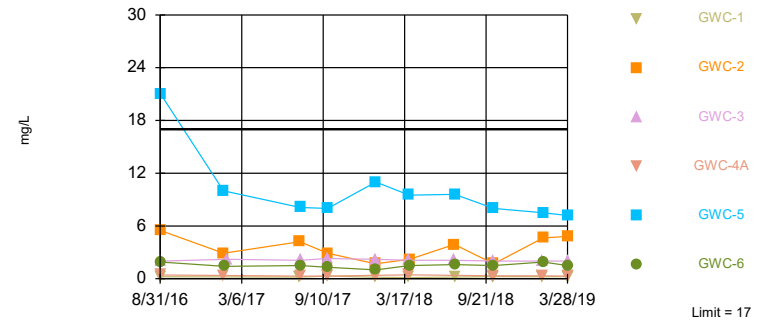


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 74 background values. 74.32% NDs. Annual per-constituent alpha = 0.004215. Individual comparison alpha = 0.0003519 (1 of 2). Comparing 6 points to limit.

Constituent: Boron Analysis Run 7/1/2019 2:34 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

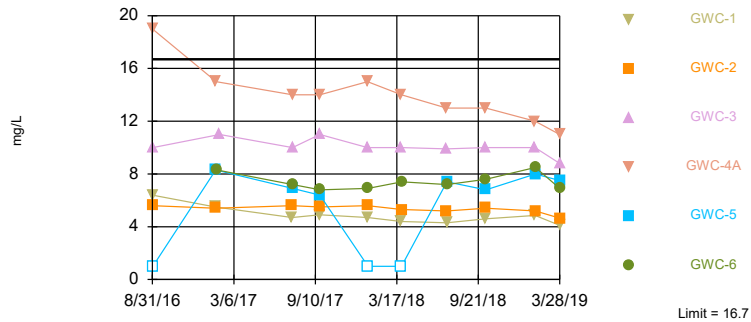


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 73 background values. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2). Comparing 6 points to limit.

Constituent: Calcium Analysis Run 7/1/2019 2:34 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Parametric

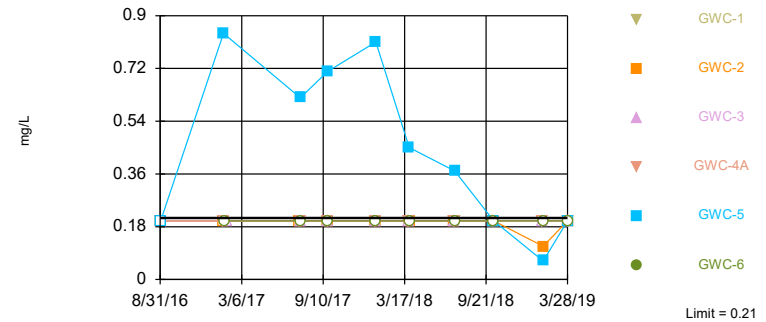


Background Data Summary (based on cube root transformation): Mean=2.011, Std. Dev.=0.298, n=74. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9606, critical = 0.956. Kappa = 1.83 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

Constituent: Chloride Analysis Run 7/1/2019 2:34 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

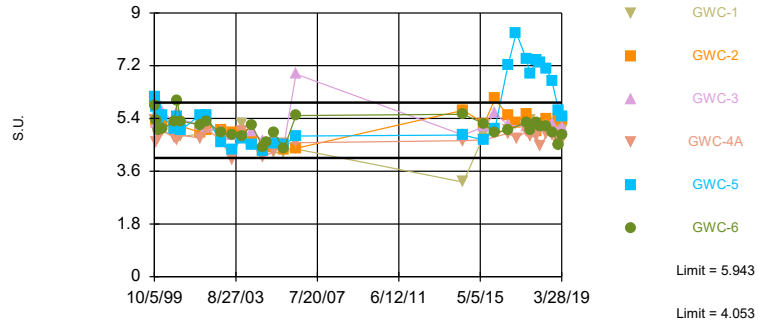


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 74 background values. 83.78% NDs. Annual per-constituent alpha = 0.004215. Individual comparison alpha = 0.0003519 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride Analysis Run 7/1/2019 2:34 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limits

Prediction Limit
Interwell Parametric

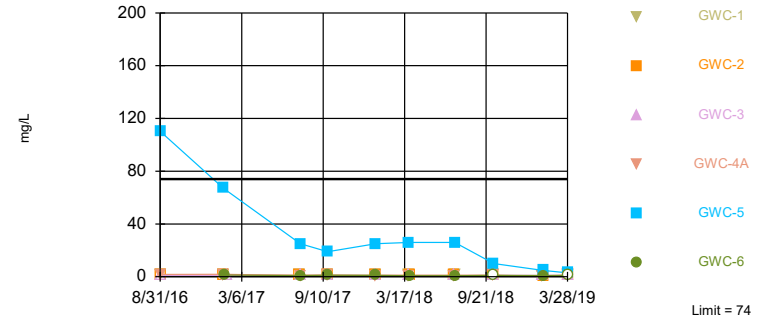


Background Data Summary: Mean=4.998, Std. Dev.=0.5278, n=208. Normality test: Chi Squared @alpha = 0.01, calculated = 13.63, critical = 14.07. Kappa = 1.79 (c=6, w=6, 1 of 2, event alpha = 0.05132). N exceeds UG tables; Kappa based on n=150. Report alpha = 0.008742. Individual comparison alpha = 0.0007311. Comparing 6 points to limit.

Constituent: pH Analysis Run 7/1/2019 2:35 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric



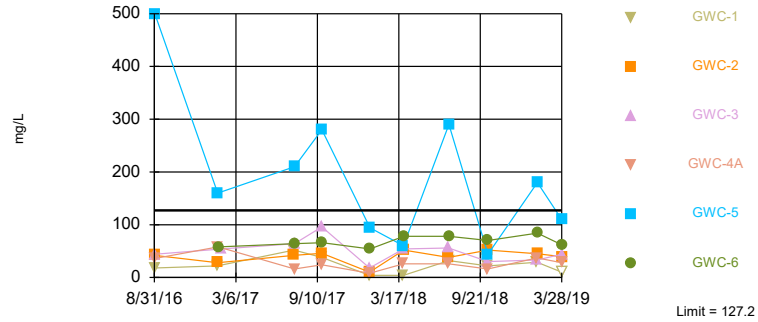
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 74 background values. 50% NDs. Annual per-constituent alpha = 0.004215. Individual comparison alpha = 0.0003519 (1 of 2). Comparing 6 points to limit.

Constituent: Sulfate Analysis Run 7/1/2019 2:35 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

Within Limit

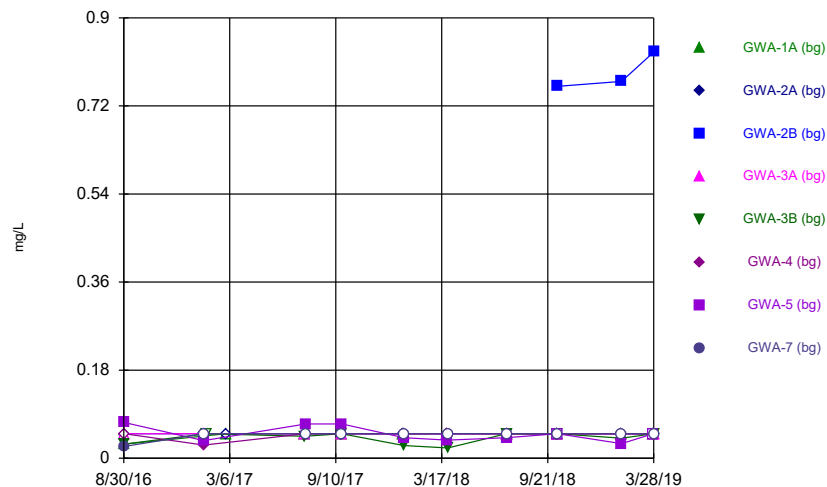
Prediction Limit
Interwell Parametric



Background Data Summary (based on square root transformation): Mean=7.091, Std. Dev.=2.286, n=73, 1.37% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9696, critical = 0.956. Kappa = 1.831 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

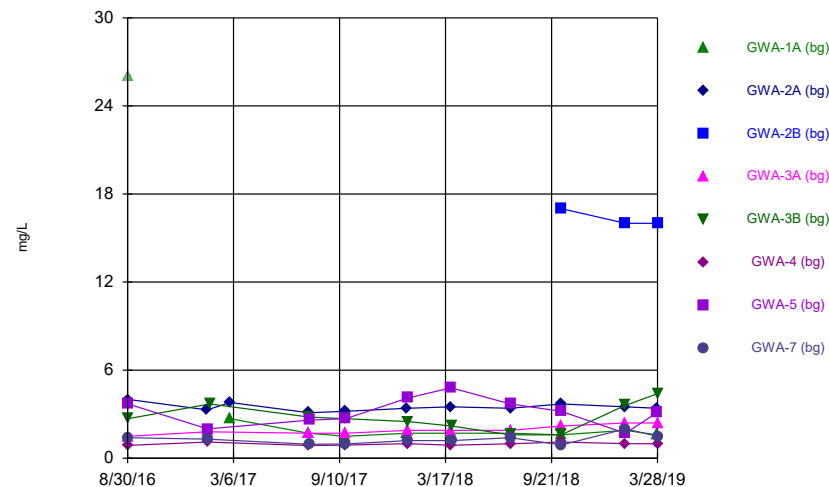
Constituent: Total Dissolved Solids Analysis Run 7/1/2019 2:35 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



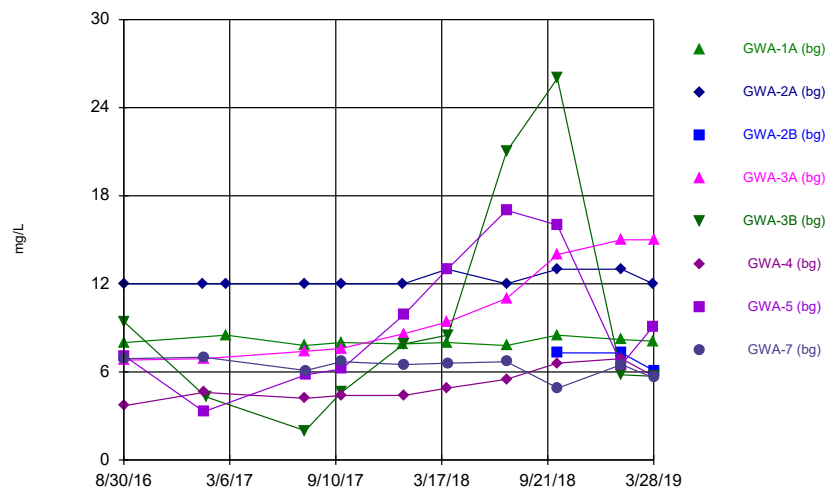
Constituent: Boron Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Calcium Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

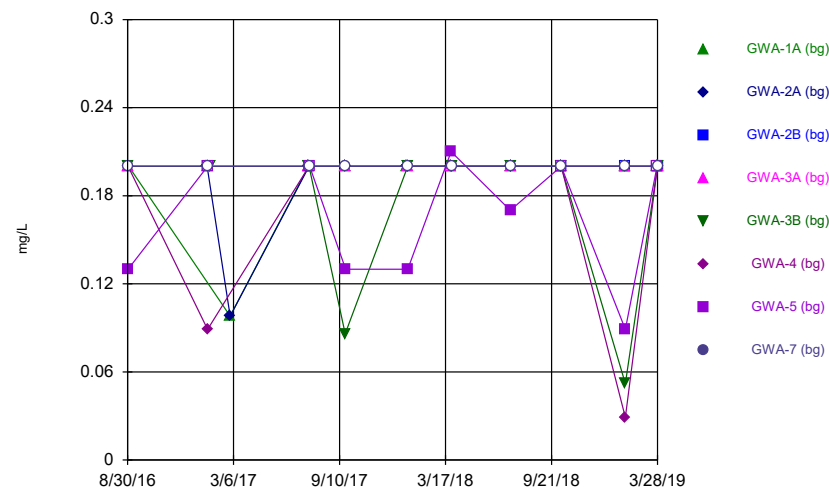
Time Series



Constituent: Chloride Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

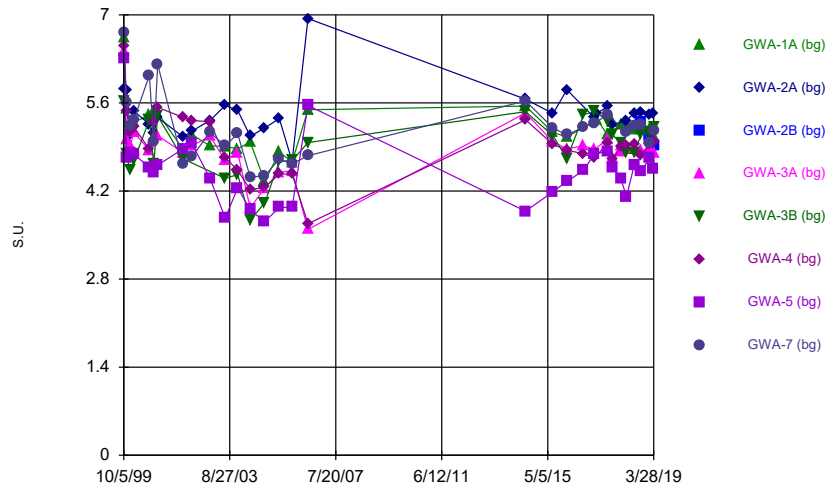
Hollow symbols indicate censored values.

Time Series



Constituent: Fluoride Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

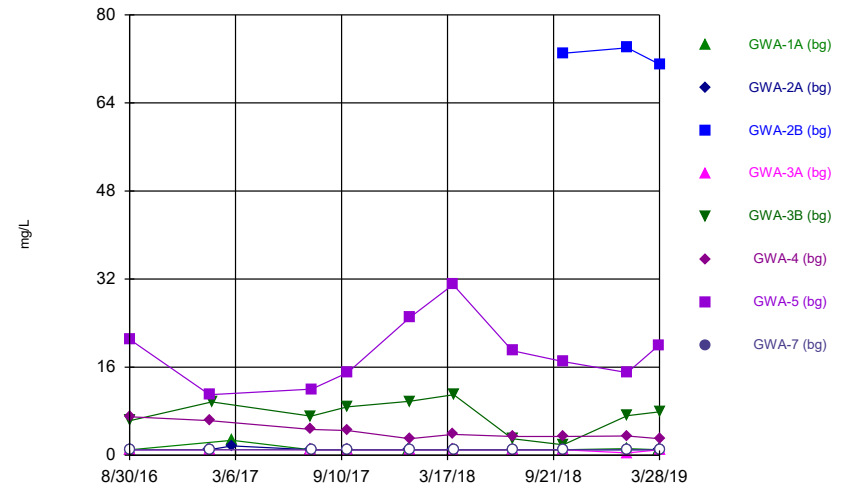
Time Series



Constituent: pH Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

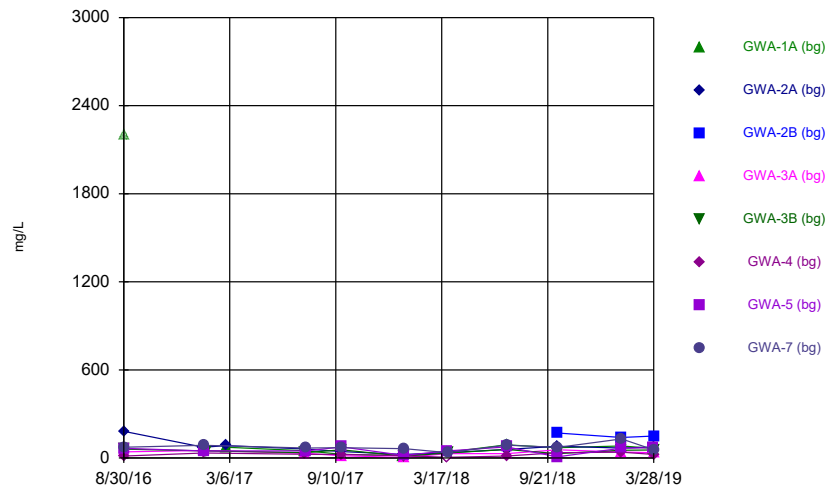
Time Series



Constituent: Sulfate Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

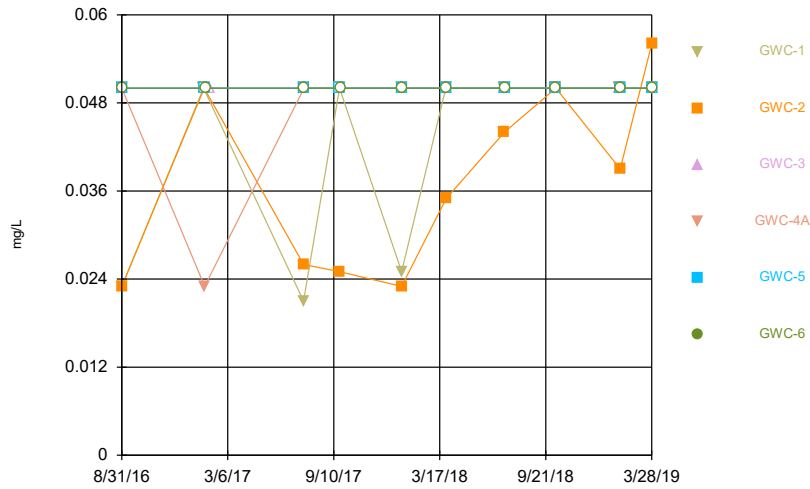
Hollow symbols indicate censored values.

Time Series



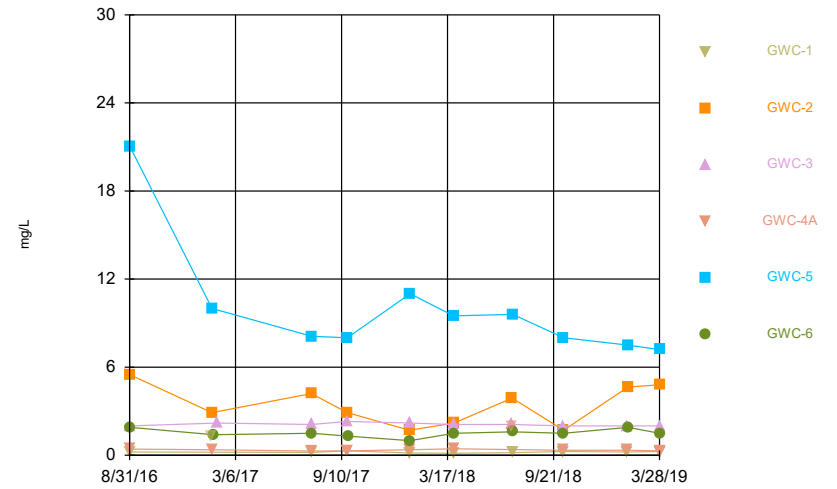
Constituent: Total Dissolved Solids Analysis Run 7/1/2019 2:42 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



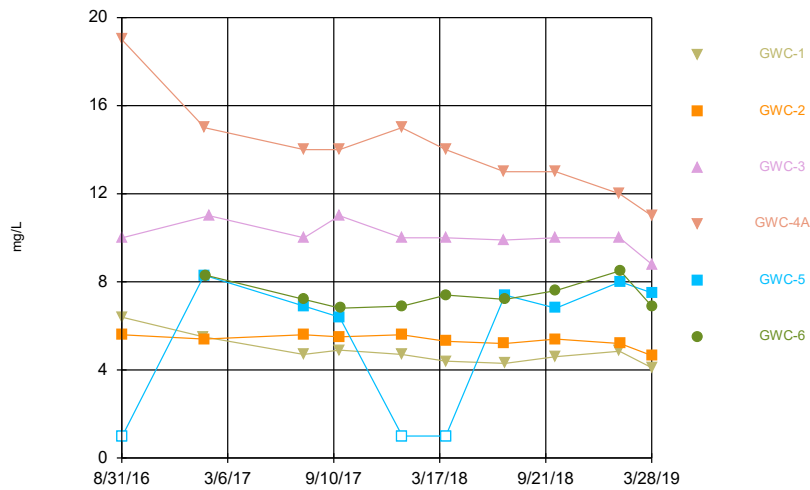
Constituent: Boron Analysis Run 7/1/2019 2:44 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



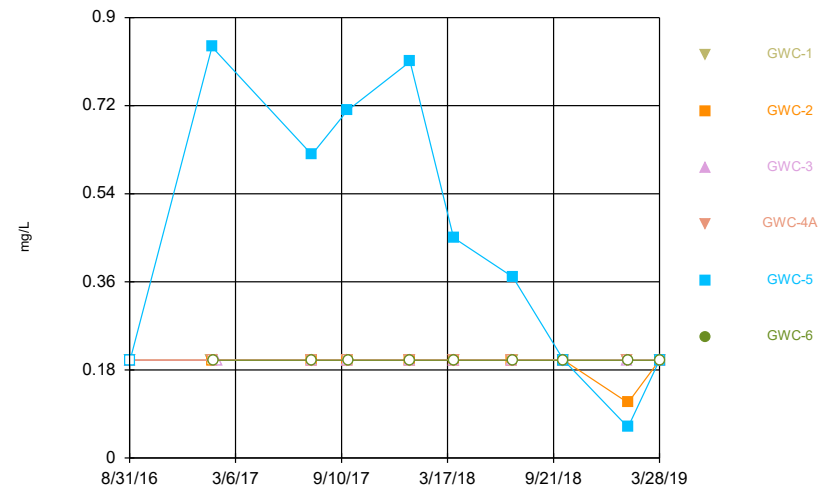
Constituent: Calcium Analysis Run 7/1/2019 2:44 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



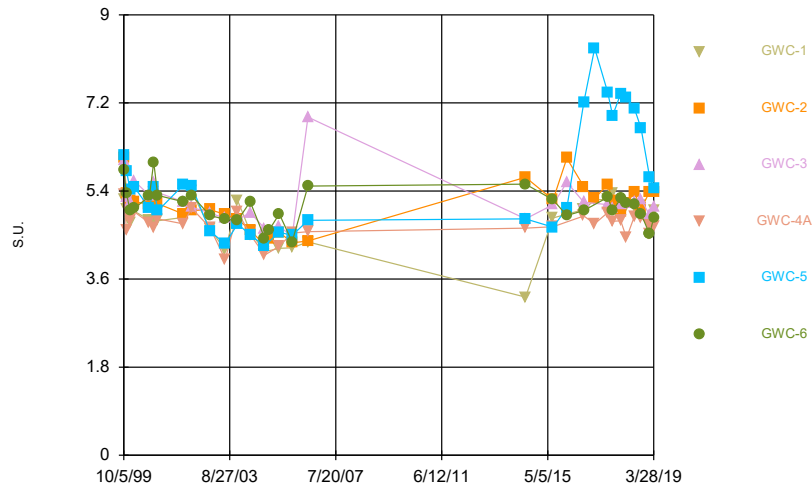
Constituent: Chloride Analysis Run 7/1/2019 2:44 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Fluoride Analysis Run 7/1/2019 2:44 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

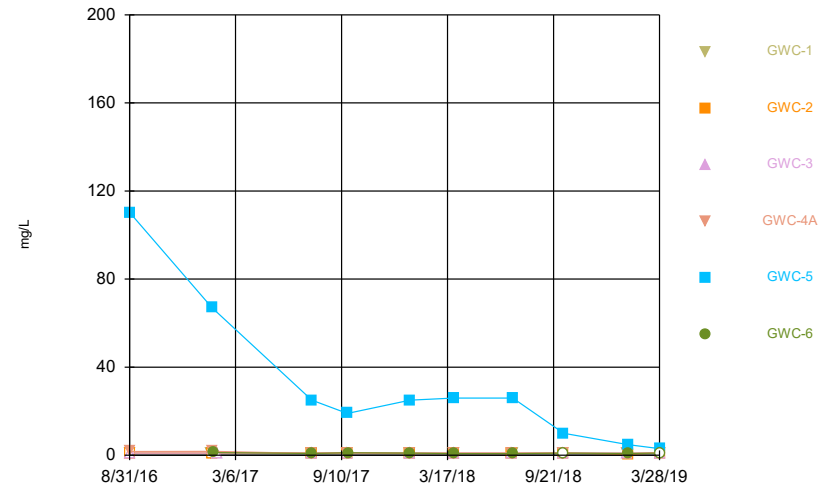
Time Series



Constituent: pH Analysis Run 7/1/2019 2:44 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

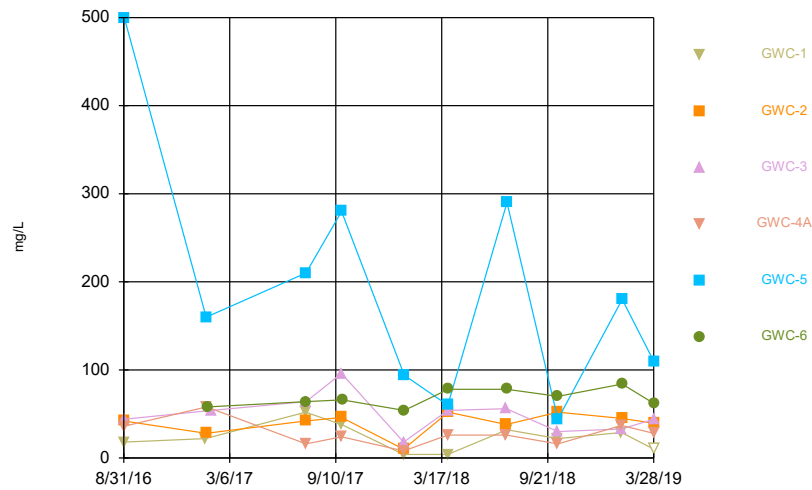
Time Series



Constituent: Sulfate Analysis Run 7/1/2019 2:44 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

Time Series



Constituent: Total Dissolved Solids Analysis Run 7/1/2019 2:44 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot- Upgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/1/2019, 2:44 PM

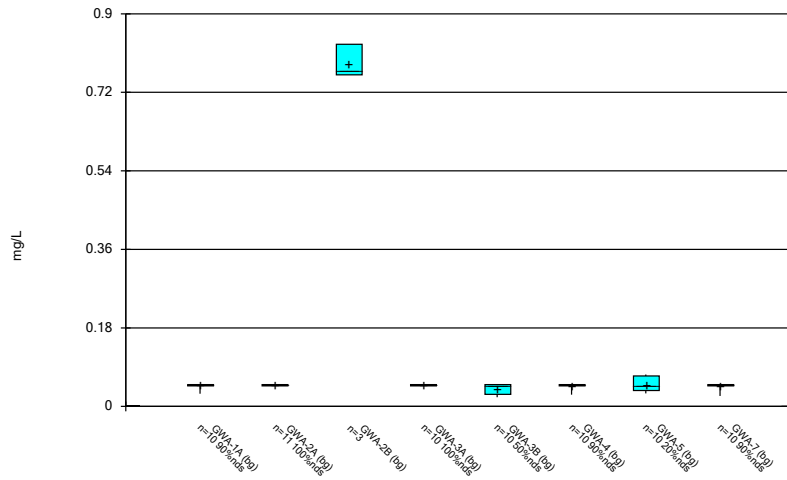
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (mg/L)	GWA-1A (bg)	10	0.0479	0.006641	0.0021	0.05	0.029	0.05	90
Boron (mg/L)	GWA-2A (bg)	11	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWA-2B (bg)	3	0.7867	0.03786	0.02186	0.77	0.76	0.83	0
Boron (mg/L)	GWA-3A (bg)	10	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWA-3B (bg)	10	0.0412	0.0115	0.003636	0.0475	0.021	0.05	50
Boron (mg/L)	GWA-4 (bg)	10	0.0477	0.007273	0.0023	0.05	0.027	0.05	90
Boron (mg/L)	GWA-5 (bg)	10	0.05	0.01571	0.004969	0.046	0.03	0.073	20
Boron (mg/L)	GWA-7 (bg)	10	0.0474	0.008222	0.0026	0.05	0.024	0.05	90
Calcium (mg/L)	GWA-1A (bg)	9	1.789	0.3586	0.1195	1.7	1.5	2.7	0
Calcium (mg/L)	GWA-2A (bg)	11	3.482	0.2639	0.07956	3.4	3.1	4	0
Calcium (mg/L)	GWA-2B (bg)	3	16.33	0.5774	0.3333	16	16	17	0
Calcium (mg/L)	GWA-3A (bg)	10	1.94	0.3026	0.09568	1.9	1.5	2.4	0
Calcium (mg/L)	GWA-3B (bg)	10	2.78	0.9041	0.2859	2.7	1.6	4.4	0
Calcium (mg/L)	GWA-4 (bg)	10	0.97	0.08667	0.02741	0.985	0.86	1.1	0
Calcium (mg/L)	GWA-5 (bg)	10	3.16	0.9524	0.3012	3.15	1.7	4.8	0
Calcium (mg/L)	GWA-7 (bg)	10	1.283	0.325	0.1028	1.25	0.91	2	0
Chloride (mg/L)	GWA-1A (bg)	10	8.08	0.253	0.08	8	7.8	8.5	0
Chloride (mg/L)	GWA-2A (bg)	11	12.27	0.4671	0.1408	12	12	13	0
Chloride (mg/L)	GWA-2B (bg)	3	6.9	0.6928	0.4	7.3	6.1	7.3	0
Chloride (mg/L)	GWA-3A (bg)	10	10.17	3.357	1.061	9	6.8	15	0
Chloride (mg/L)	GWA-3B (bg)	10	9.52	7.771	2.457	6.85	2	26	0
Chloride (mg/L)	GWA-4 (bg)	10	5.09	1.057	0.3341	4.75	3.7	6.9	0
Chloride (mg/L)	GWA-5 (bg)	10	9.39	4.579	1.448	8.1	3.3	17	0
Chloride (mg/L)	GWA-7 (bg)	10	6.35	0.6502	0.2056	6.55	4.9	7	0
Fluoride (mg/L)	GWA-1A (bg)	10	0.1898	0.03226	0.0102	0.2	0.098	0.2	90
Fluoride (mg/L)	GWA-2A (bg)	11	0.1907	0.03075	0.009273	0.2	0.098	0.2	90.91
Fluoride (mg/L)	GWA-2B (bg)	3	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWA-3A (bg)	10	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWA-3B (bg)	10	0.1738	0.05581	0.01765	0.2	0.052	0.2	80
Fluoride (mg/L)	GWA-4 (bg)	10	0.1718	0.06111	0.01932	0.2	0.029	0.2	80
Fluoride (mg/L)	GWA-5 (bg)	10	0.1659	0.04268	0.0135	0.185	0.089	0.21	40
Fluoride (mg/L)	GWA-7 (bg)	10	0.2	0	0	0.2	0.2	0.2	100
pH (S.U.)	GWA-1A (bg)	29	5.191	0.3882	0.07208	5.17	4.35	6.63	0
pH (S.U.)	GWA-2A (bg)	29	5.424	0.383	0.07112	5.42	4.67	6.94	0
pH (S.U.)	GWA-2B (bg)	3	5.1	0.1808	0.1044	5.08	4.93	5.29	0
pH (S.U.)	GWA-3A (bg)	31	4.853	0.455	0.08171	4.87	3.59	6.42	0
pH (S.U.)	GWA-3B (bg)	28	4.898	0.4444	0.08399	4.885	3.74	5.62	0
pH (S.U.)	GWA-4 (bg)	30	4.937	0.5029	0.09181	4.93	3.68	6.51	0
pH (S.U.)	GWA-5 (bg)	30	4.522	0.5279	0.09637	4.545	3.71	6.3	0
pH (S.U.)	GWA-7 (bg)	28	5.184	0.5133	0.09701	5.14	4.42	6.71	0
Sulfate (mg/L)	GWA-1A (bg)	10	1.19	0.5343	0.169	1	1	2.7	80
Sulfate (mg/L)	GWA-2A (bg)	11	1.064	0.2111	0.06364	1	1	1.7	90.91
Sulfate (mg/L)	GWA-2B (bg)	3	72.67	1.528	0.8819	73	71	74	0
Sulfate (mg/L)	GWA-3A (bg)	10	0.941	0.1866	0.059	1	0.41	1	90
Sulfate (mg/L)	GWA-3B (bg)	10	7.27	2.925	0.925	7.55	1.9	11	0
Sulfate (mg/L)	GWA-4 (bg)	10	4.26	1.389	0.4392	3.65	3	7	0
Sulfate (mg/L)	GWA-5 (bg)	10	18.6	6.077	1.922	18	11	31	0
Sulfate (mg/L)	GWA-7 (bg)	10	1	0	0	1	1	1	100
Total Dissolved Solids...	GWA-1A (bg)	9	57.11	25.58	8.525	66	16	90	0
Total Dissolved Solids...	GWA-2A (bg)	11	71.36	40.71	12.28	68	24	180	0

Box & Whiskers Plot- Upgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/1/2019, 2:44 PM

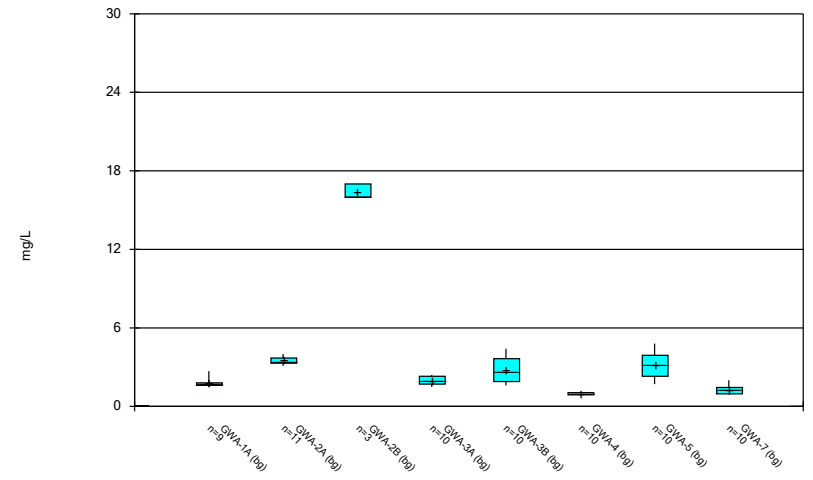
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Std. Err.</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>	<u>%NDs</u>
Total Dissolved Solids...	GWA-2B (bg)	3	153.3	15.28	8.819	150	140	170	0
Total Dissolved Solids...	GWA-3A (bg)	10	33.9	15.58	4.927	34	4	56	0
Total Dissolved Solids...	GWA-3B (bg)	10	44.2	15.63	4.941	50.5	12	60	0
Total Dissolved Solids...	GWA-4 (bg)	10	23.3	11.18	3.534	24	5	40	10
Total Dissolved Solids...	GWA-5 (bg)	10	52.5	23.65	7.479	57	8	76	0
Total Dissolved Solids...	GWA-7 (bg)	10	74.4	24.49	7.745	71	36	130	0

Box & Whiskers Plot



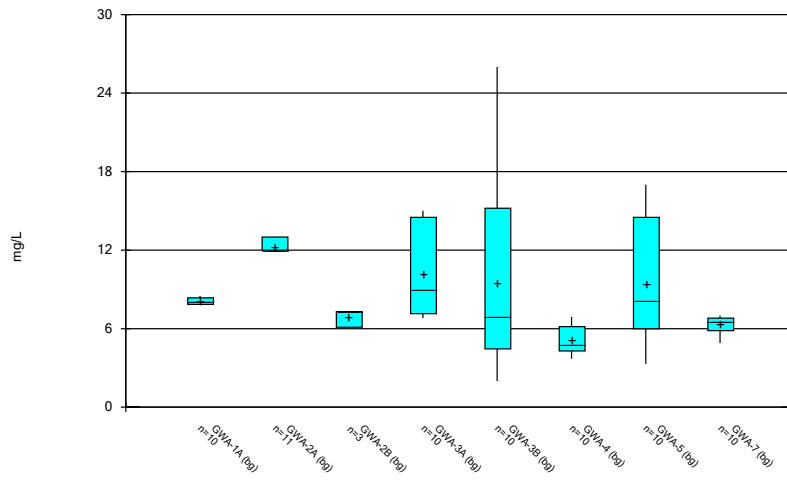
Constituent: Boron Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



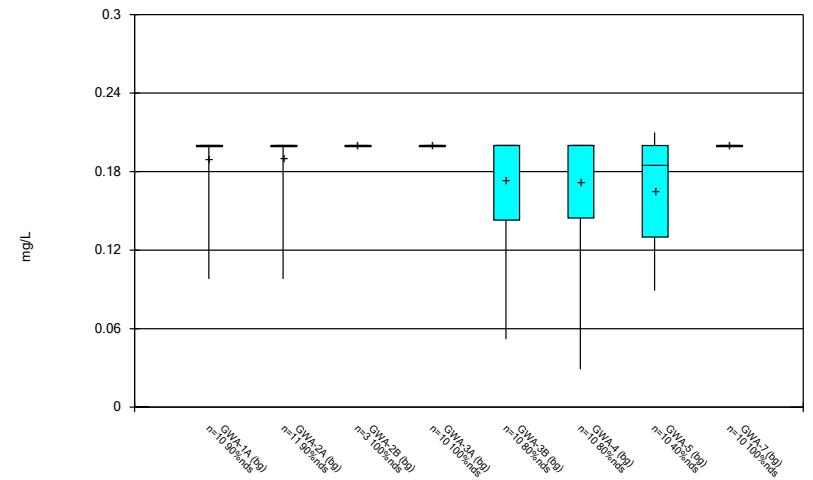
Constituent: Calcium Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



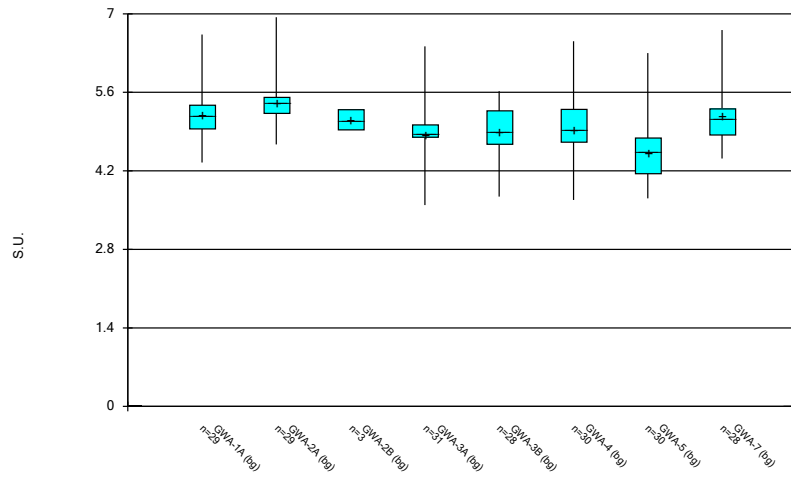
Constituent: Chloride Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



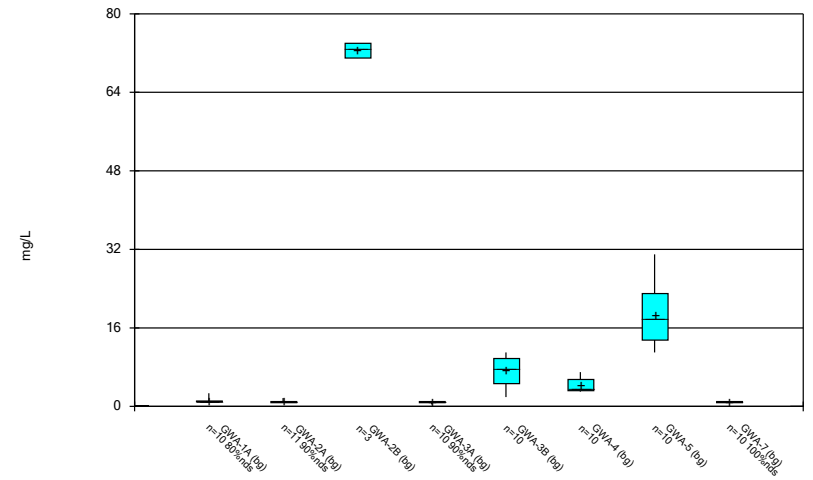
Constituent: Fluoride Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



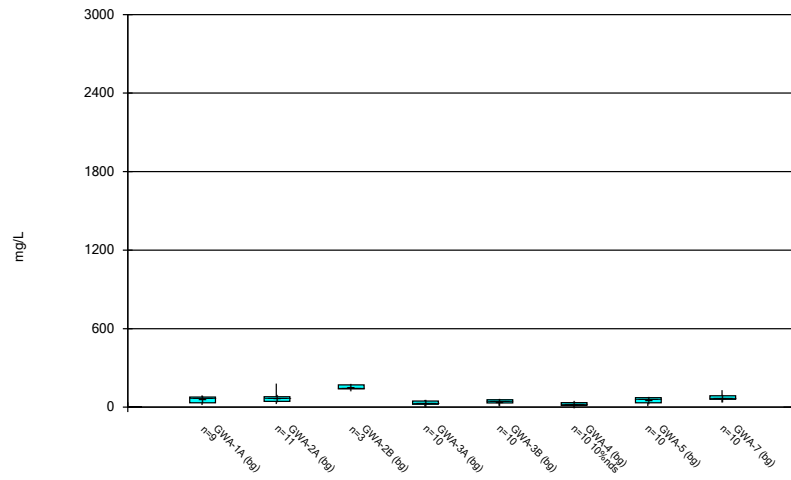
Constituent: pH Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Sulfate Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



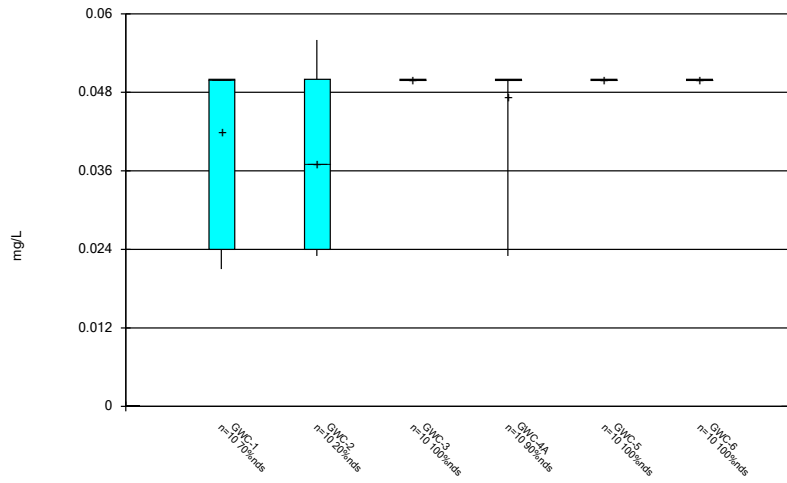
Constituent: Total Dissolved Solids Analysis Run 7/1/2019 2:43 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot-Downgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 7/1/2019, 2:46 PM

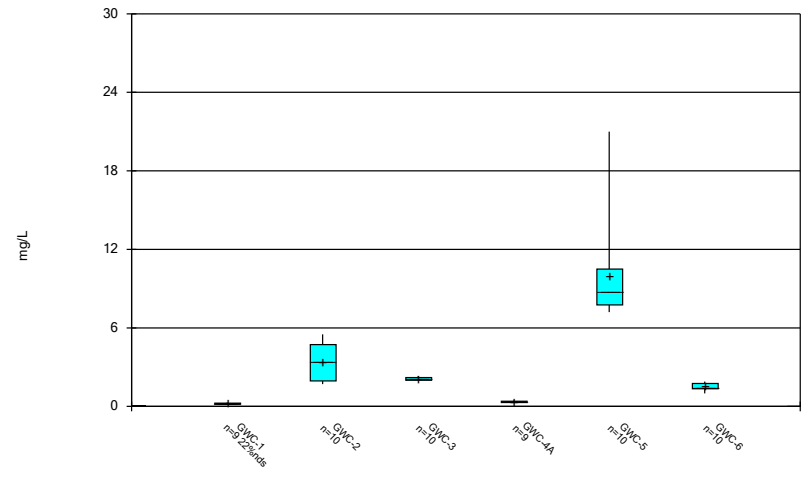
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Std. Err.</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>	<u>%NDs</u>
Boron (mg/L)	GWC-1	10	0.0419	0.01308	0.004135	0.05	0.021	0.05	70
Boron (mg/L)	GWC-2	10	0.0371	0.01253	0.003962	0.037	0.023	0.056	20
Boron (mg/L)	GWC-3	10	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWC-4A	10	0.0473	0.008538	0.0027	0.05	0.023	0.05	90
Boron (mg/L)	GWC-5	10	0.05	0	0	0.05	0.05	0.05	100
Boron (mg/L)	GWC-6	10	0.05	0	0	0.05	0.05	0.05	100
Calcium (mg/L)	GWC-1	9	0.2128	0.05032	0.01677	0.22	0.14	0.3	22.22
Calcium (mg/L)	GWC-2	10	3.445	1.355	0.4285	3.4	1.7	5.5	0
Calcium (mg/L)	GWC-3	10	2.1	0.1054	0.03333	2.1	2	2.3	0
Calcium (mg/L)	GWC-4A	9	0.3533	0.05362	0.01787	0.34	0.29	0.44	0
Calcium (mg/L)	GWC-5	10	9.99	4.057	1.283	8.8	7.2	21	0
Calcium (mg/L)	GWC-6	10	1.51	0.2644	0.0836	1.5	1	1.9	0
Chloride (mg/L)	GWC-1	10	4.845	0.6669	0.2109	4.7	4.1	6.4	0
Chloride (mg/L)	GWC-2	10	5.345	0.2891	0.09142	5.4	4.65	5.6	0
Chloride (mg/L)	GWC-3	10	10.07	0.6147	0.1944	10	8.8	11	0
Chloride (mg/L)	GWC-4A	10	14	2.16	0.6831	14	11	19	0
Chloride (mg/L)	GWC-5	10	5.43	3.107	0.9824	6.85	1	8.3	30
Chloride (mg/L)	GWC-6	9	7.422	0.6119	0.204	7.2	6.8	8.5	0
Fluoride (mg/L)	GWC-1	10	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWC-2	10	0.1913	0.02751	0.0087	0.2	0.113	0.2	90
Fluoride (mg/L)	GWC-3	10	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWC-4A	10	0.2	0	0	0.2	0.2	0.2	100
Fluoride (mg/L)	GWC-5	10	0.4463	0.2832	0.08955	0.41	0.063	0.84	30
Fluoride (mg/L)	GWC-6	9	0.2	0	0	0.2	0.2	0.2	100
pH (S.U.)	GWC-1	29	4.798	0.4616	0.08571	4.86	3.23	5.39	0
pH (S.U.)	GWC-2	31	5.106	0.4423	0.07943	5.15	4.29	6.08	0
pH (S.U.)	GWC-3	29	5.186	0.46	0.08541	5.13	4.47	6.91	0
pH (S.U.)	GWC-4A	30	4.695	0.2704	0.04936	4.715	4	5.33	0
pH (S.U.)	GWC-5	30	5.657	1.125	0.2054	5.47	4.28	8.32	0
pH (S.U.)	GWC-6	31	5.067	0.3762	0.06756	5.04	4.36	5.99	0
Sulfate (mg/L)	GWC-1	10	0.966	0.1075	0.034	1	0.66	1	90
Sulfate (mg/L)	GWC-2	10	0.9525	0.1502	0.0475	1	0.525	1	90
Sulfate (mg/L)	GWC-3	10	1	0	0	1	1	1	100
Sulfate (mg/L)	GWC-4A	10	1.077	0.3764	0.119	0.95	0.76	1.8	10
Sulfate (mg/L)	GWC-5	10	31.58	32.85	10.39	25	3	110	0
Sulfate (mg/L)	GWC-6	9	0.9456	0.1448	0.04828	0.95	0.78	1.2	22.22
Total Dissolved Solids...	GWC-1	10	23.1	15.28	4.831	22	4	52	10
Total Dissolved Solids...	GWC-2	10	39.45	12.48	3.947	42	10	52	0
Total Dissolved Solids...	GWC-3	10	49.3	21.5	6.799	49	18	96	0
Total Dissolved Solids...	GWC-4A	10	27.5	13.96	4.415	26	8	58	0
Total Dissolved Solids...	GWC-5	10	192.8	137.2	43.38	170	44	500	0
Total Dissolved Solids...	GWC-6	9	68.22	10.07	3.357	66	54	84	0

Box & Whiskers Plot



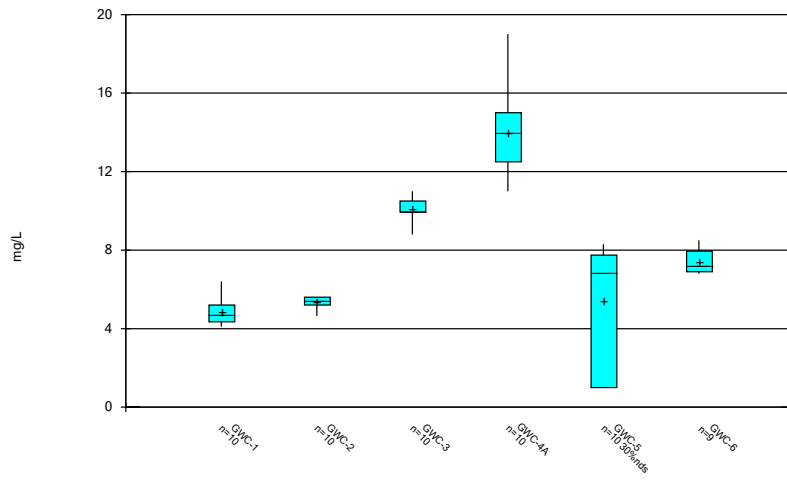
Constituent: Boron Analysis Run 7/1/2019 2:46 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



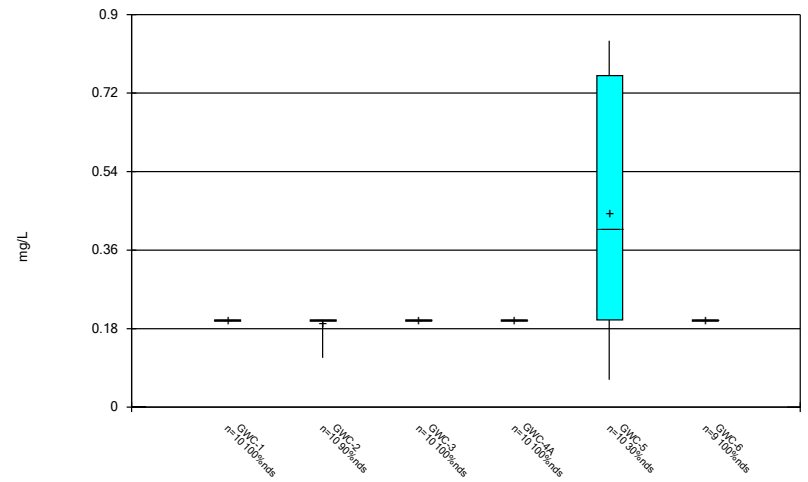
Constituent: Calcium Analysis Run 7/1/2019 2:46 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



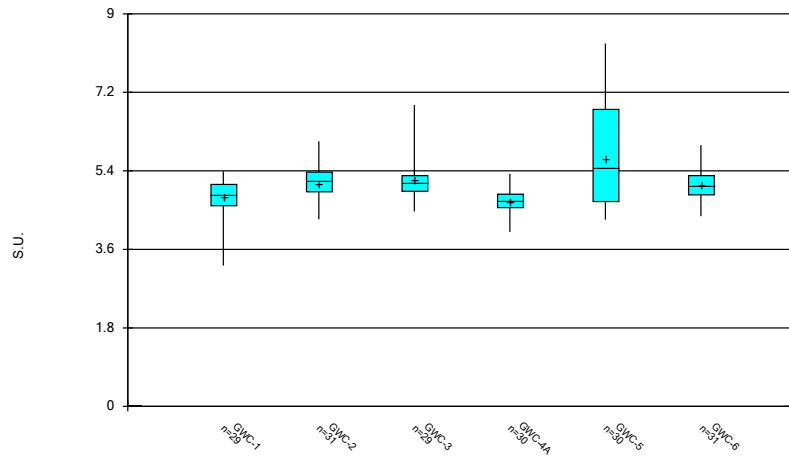
Constituent: Chloride Analysis Run 7/1/2019 2:46 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



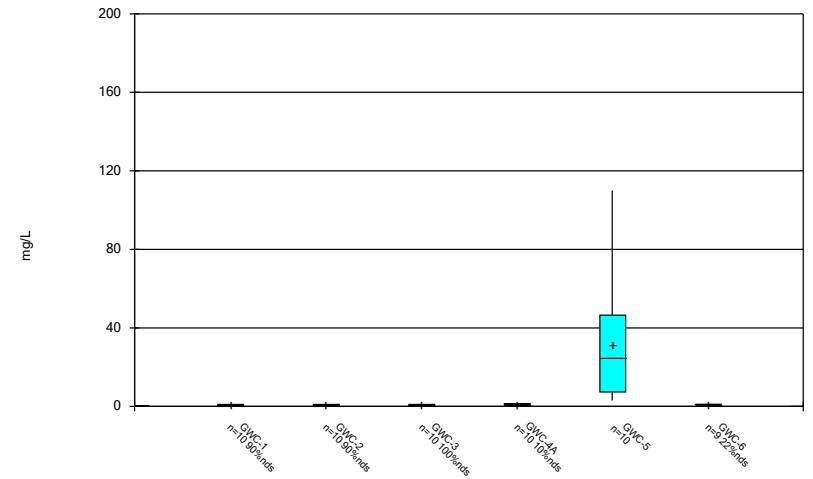
Constituent: Fluoride Analysis Run 7/1/2019 2:46 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



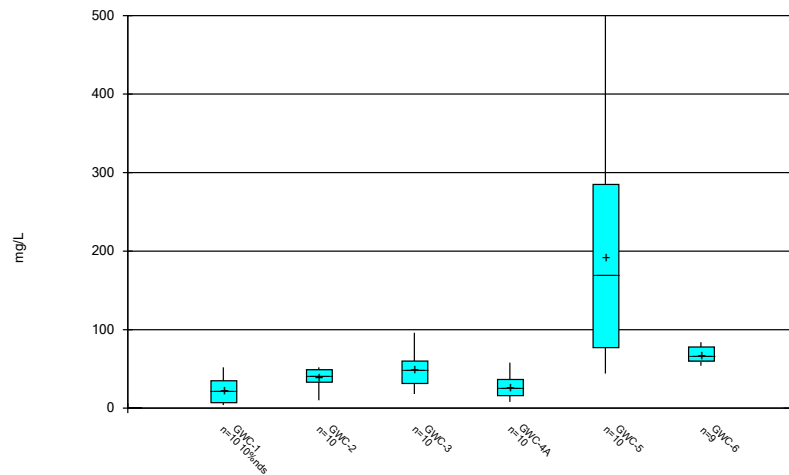
Constituent: pH Analysis Run 7/1/2019 2:46 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Sulfate Analysis Run 7/1/2019 2:46 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 7/1/2019 2:46 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Georgia Power Company
2019 Annual Groundwater Monitoring and Corrective Action
Report
Plant McIntosh Inactive Landfill No. 3
Permit No. 051-008D(L)(I)
August 2019

Appendix D1

Sanitas™ Outputs for State Compliance Parameters - January 2019

Interwell Prediction Limit - Significant Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/11/2019, 8:59 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Barium (mg/L)	GWC-5	0.3	n/a	1/31/2019	0.45	Yes	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2

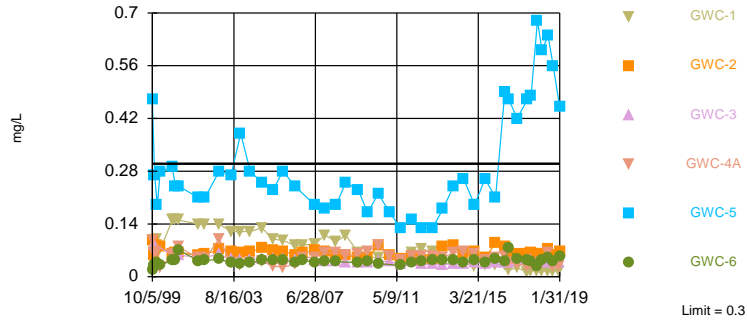
Interwell Prediction Limit - All Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/11/2019, 8:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Obsrv.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	Transform	Alpha	Method
Barium (mg/L)	GWC-1	0.3	n/a	1/30/2019	0.0155	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-2	0.3	n/a	1/31/2019	0.067	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-3	0.3	n/a	1/30/2019	0.037	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-4A	0.3	n/a	1/30/2019	0.027	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-5	0.3	n/a	1/31/2019	0.45	Yes	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-6	0.3	n/a	1/31/2019	0.053	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Beryllium (mg/L)	GWC-1	0.0041	n/a	1/30/2019	0.001295	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-2	0.0041	n/a	1/31/2019	0.000076	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-3	0.0041	n/a	1/30/2019	0.00033	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-4A	0.0041	n/a	1/30/2019	0.00007	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-5	0.0041	n/a	1/31/2019	0.0012	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-6	0.0041	n/a	1/31/2019	0.00012	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Chromium (mg/L)	GWC-1	0.097	n/a	1/30/2019	0.00171	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-2	0.097	n/a	1/31/2019	0.0059	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-3	0.097	n/a	1/30/2019	0.0047	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-4A	0.097	n/a	1/30/2019	0.0025ND	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-5	0.097	n/a	1/31/2019	0.0025ND	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-6	0.097	n/a	1/31/2019	0.0025ND	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Cobalt (mg/L)	GWC-1	0.017	n/a	1/30/2019	0.00018	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-2	0.017	n/a	1/31/2019	0.0009	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-3	0.017	n/a	1/30/2019	0.00051	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-4A	0.017	n/a	1/30/2019	0.00038	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-5	0.017	n/a	1/31/2019	0.013	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-6	0.017	n/a	1/31/2019	0.00076	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-1	0.019	n/a	1/30/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-2	0.019	n/a	1/31/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-3	0.019	n/a	1/30/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-4A	0.019	n/a	1/30/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-5	0.019	n/a	1/31/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-6	0.019	n/a	1/31/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-1	0.044	n/a	1/30/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-2	0.044	n/a	1/31/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-3	0.044	n/a	1/30/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-4A	0.044	n/a	1/30/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-5	0.044	n/a	1/31/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-6	0.044	n/a	1/31/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.11	n/a	1/30/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.11	n/a	1/31/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-3	0.11	n/a	1/30/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-4A	0.11	n/a	1/30/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-5	0.11	n/a	1/31/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-6	0.11	n/a	1/31/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Zinc (mg/L)	GWC-1	0.15	n/a	1/30/2019	0.02ND	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.15	n/a	1/31/2019	0.02ND	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-3	0.15	n/a	1/30/2019	0.0033	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-4A	0.15	n/a	1/30/2019	0.0042	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-5	0.15	n/a	1/31/2019	0.033	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-6	0.15	n/a	1/31/2019	0.02ND	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2

Exceeds Limit: GWC-5

Prediction Limit
Interwell Non-parametric

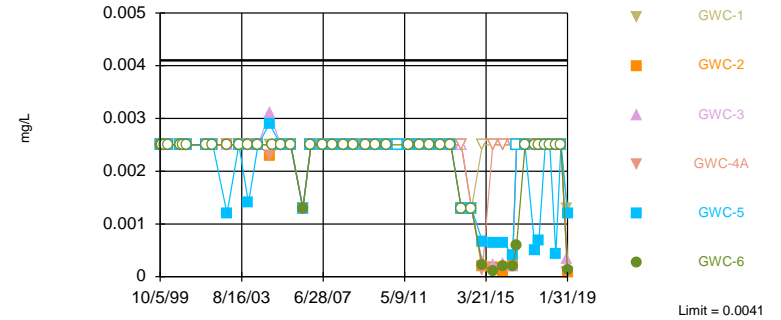


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 305 background values. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Barium Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

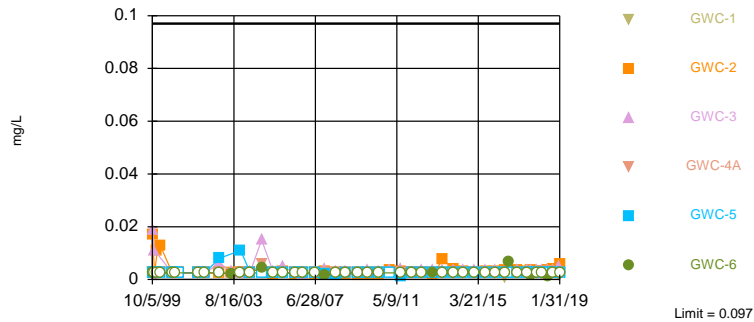


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 308 background values. 81.82% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Beryllium Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

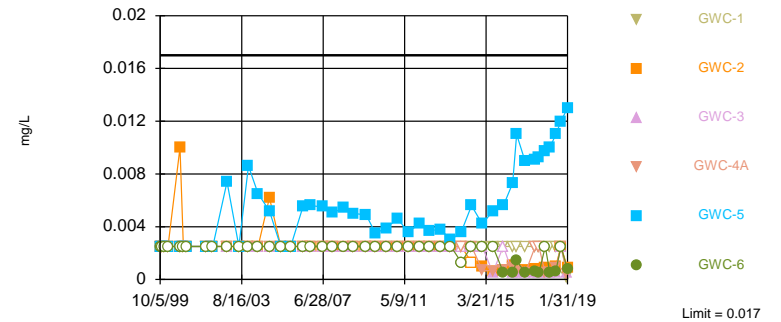


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 304 background values. 44.08% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Chromium Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

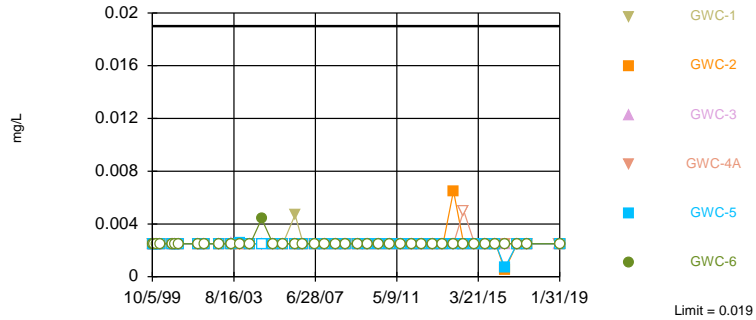


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 304 background values. 69.08% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Cobalt Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

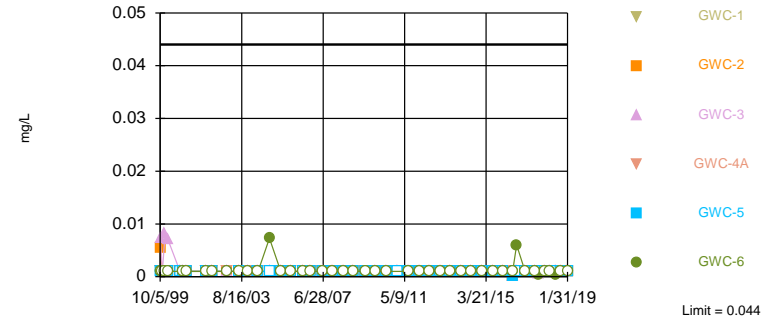


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 263 background values. 89.35% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Copper Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

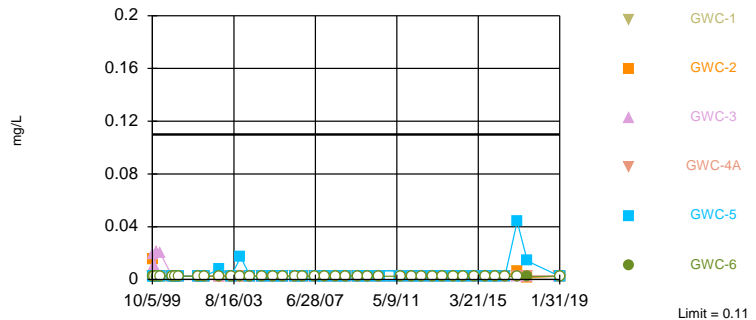


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 307 background values. 83.06% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Lead Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

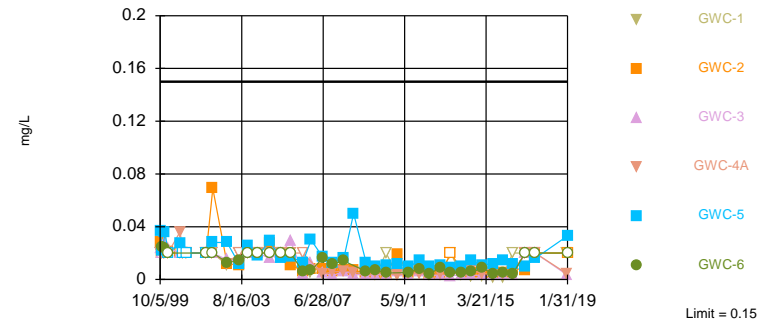


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 260 background values. 69.62% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Vanadium Analysis Run 6/11/2019 8:59 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

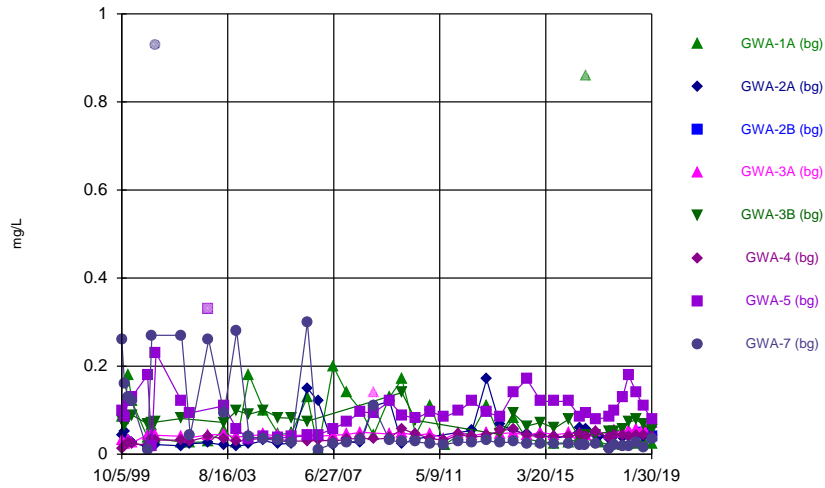
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 260 background values. 29.23% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Zinc Analysis Run 6/11/2019 8:59 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

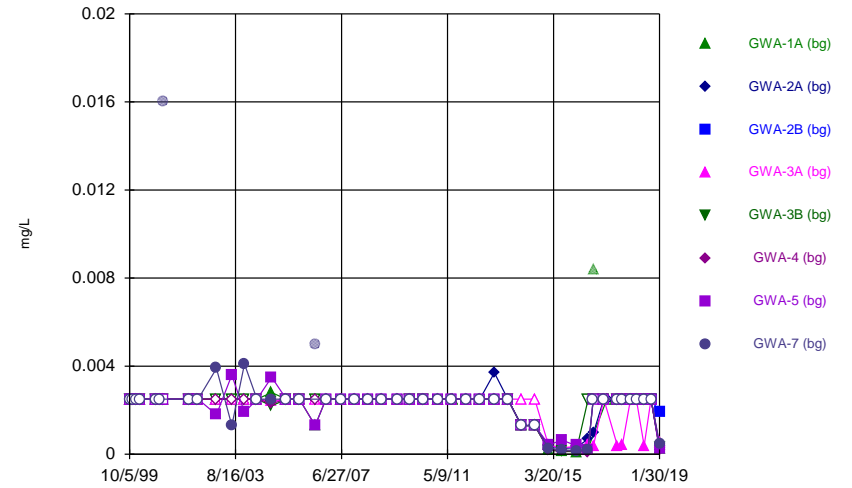
Time Series



Constituent: Barium Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

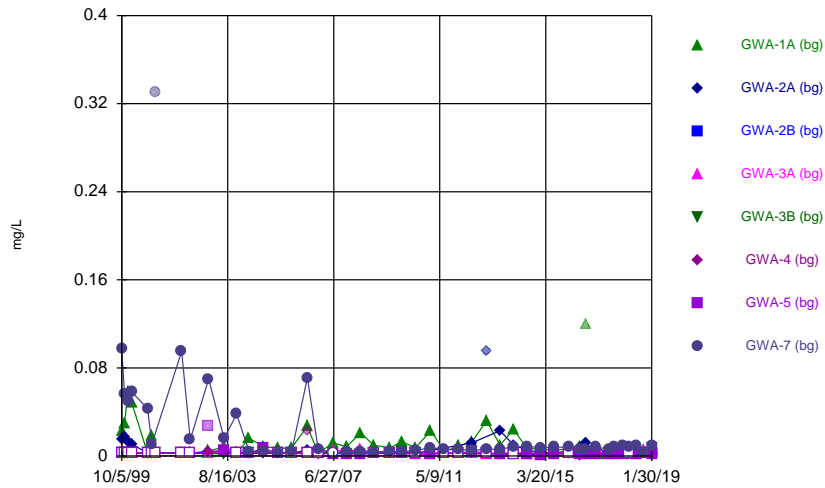
Time Series



Constituent: Beryllium Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

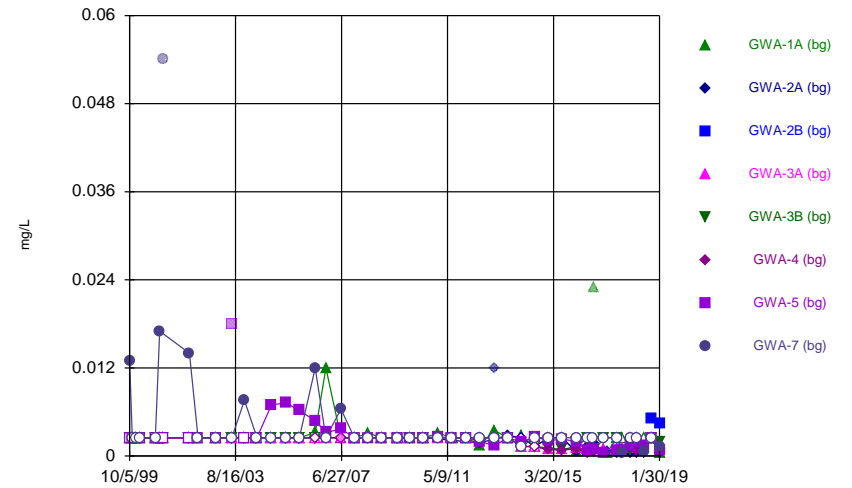
Time Series



Constituent: Chromium Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

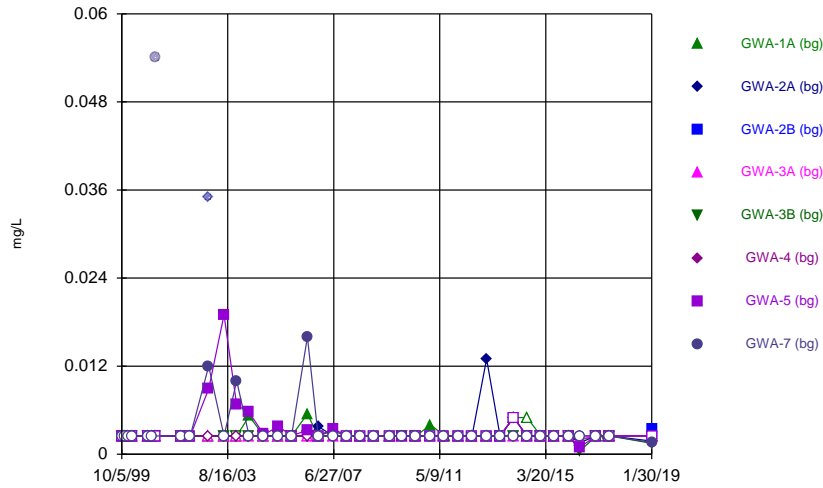
Hollow symbols indicate censored values.

Time Series



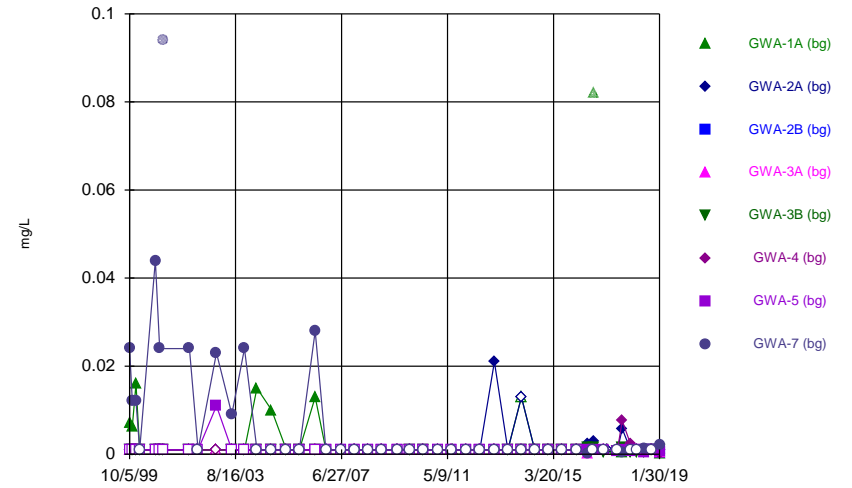
Constituent: Cobalt Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



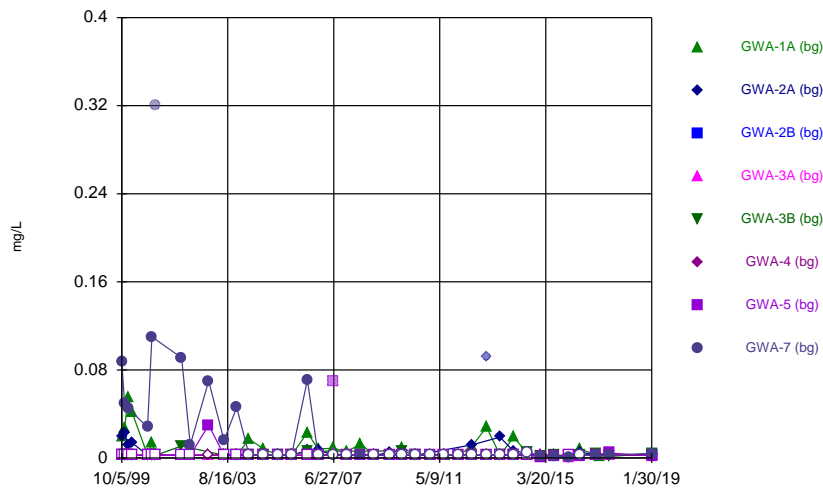
Constituent: Copper Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



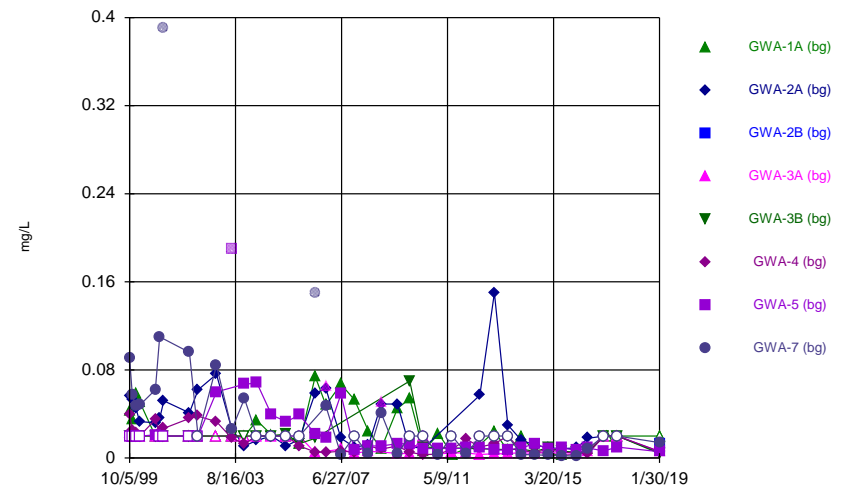
Constituent: Lead Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



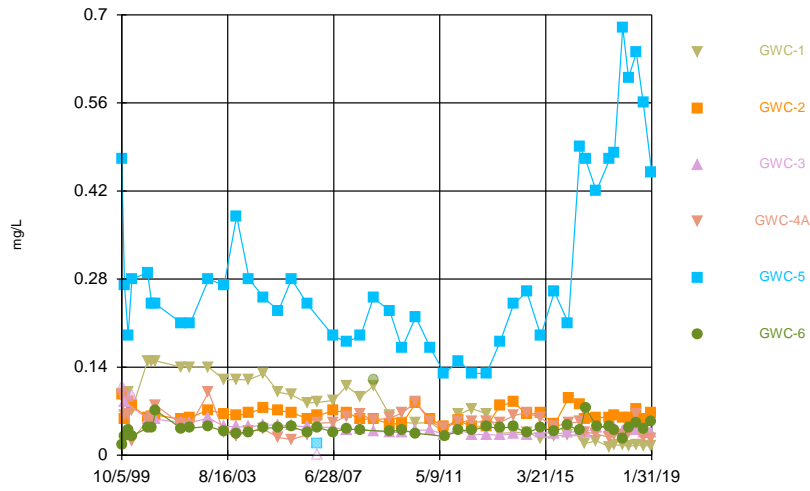
Constituent: Vanadium Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



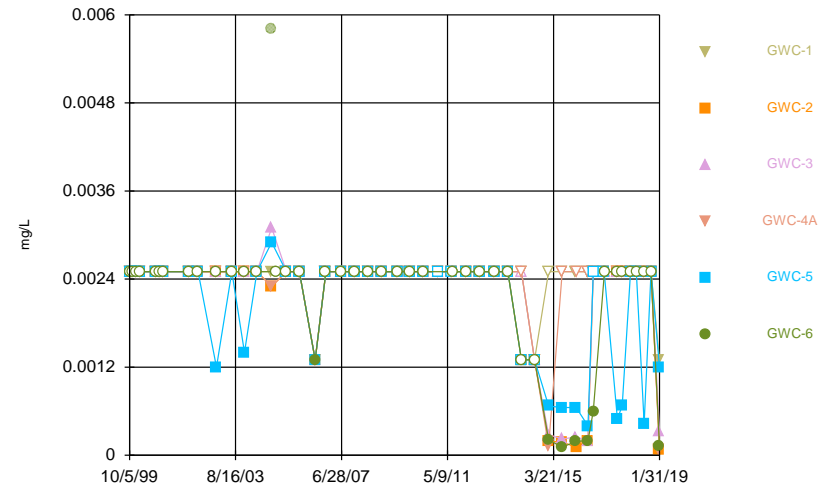
Constituent: Zinc Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



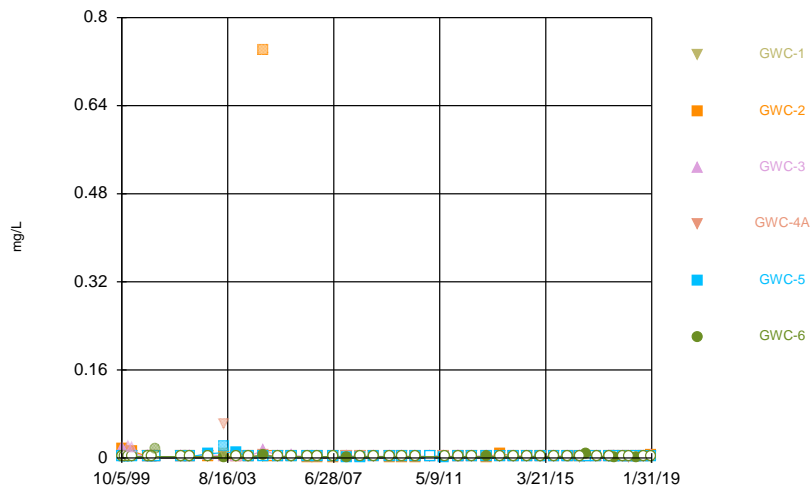
Constituent: Barium Analysis Run 6/10/2019 11:05 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



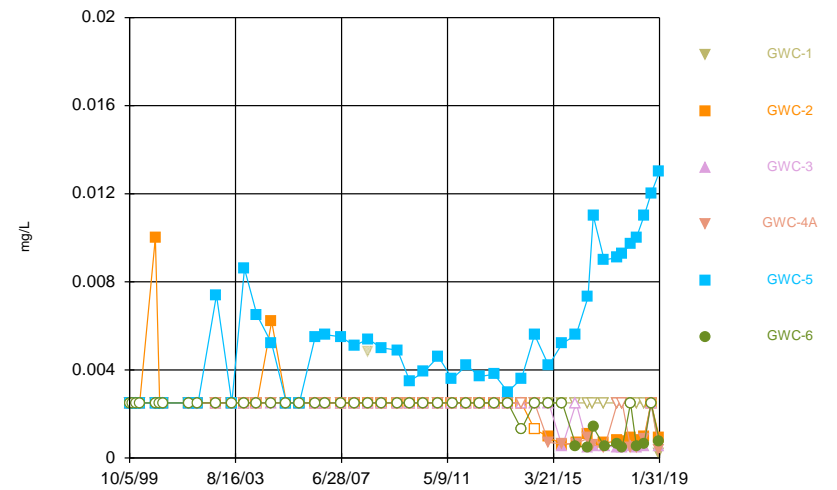
Constituent: Beryllium Analysis Run 6/10/2019 11:05 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



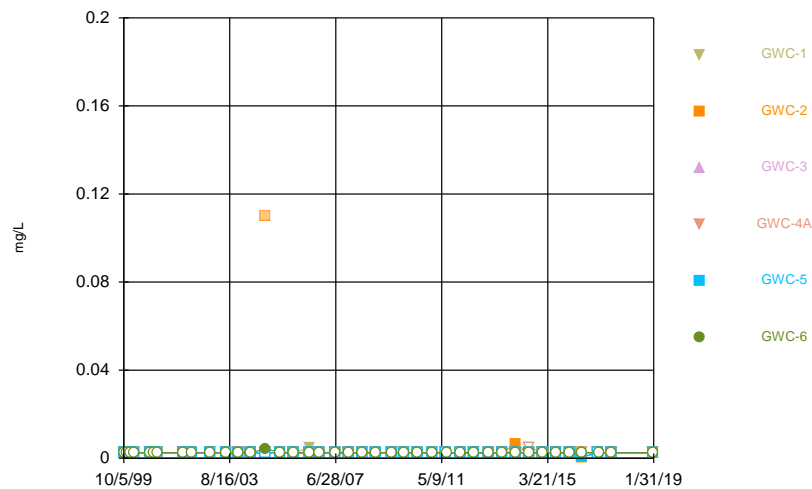
Constituent: Chromium Analysis Run 6/10/2019 11:05 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



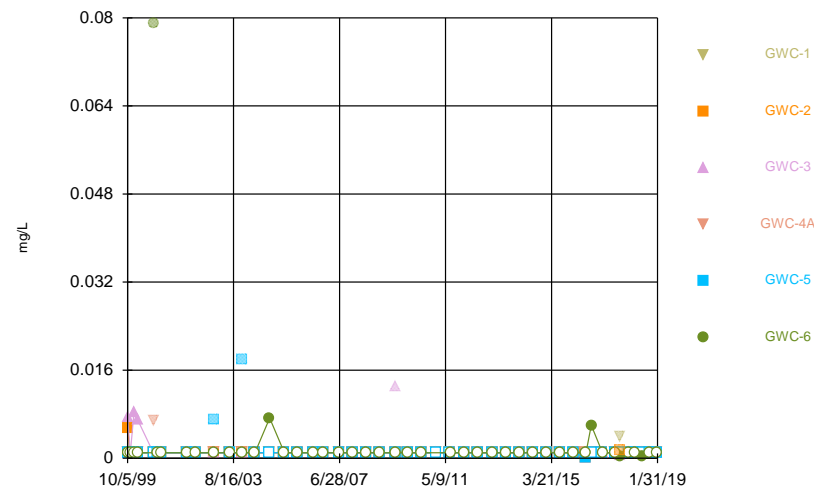
Constituent: Cobalt Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



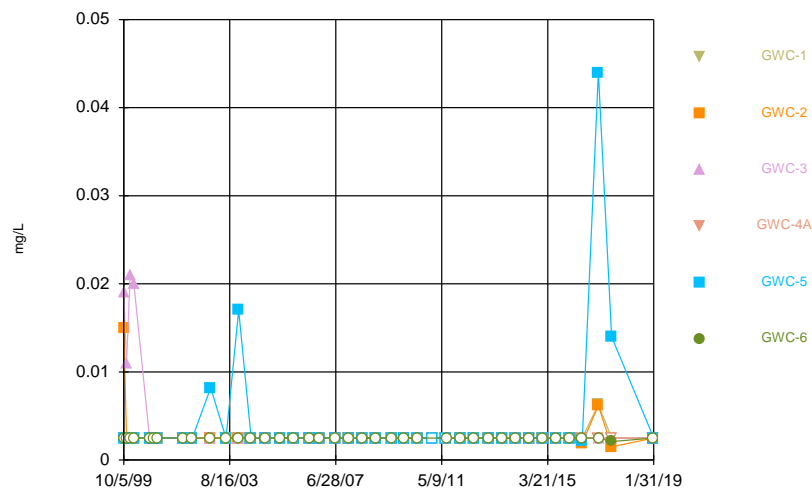
Constituent: Copper Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



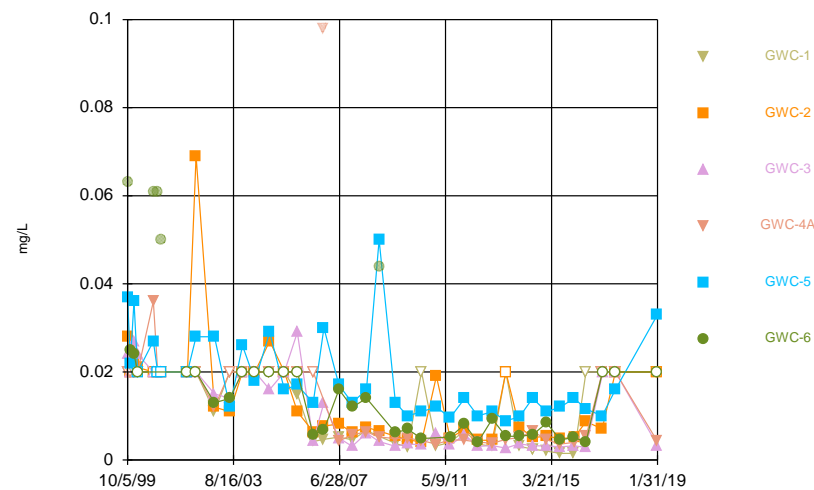
Constituent: Lead Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Vanadium Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Zinc Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

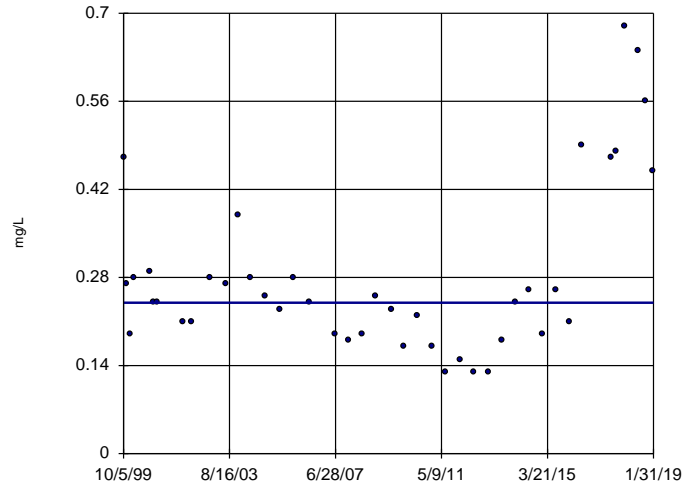
Trend Test

Plant McIntosh Client: GEI Data: McIntosh No 3 Printed 4/8/2019, 10:38 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Barium, Total (mg/L)	GWC-5	0	0.1629	2.33	No	42	0	n/a	n/a	0.02	NP

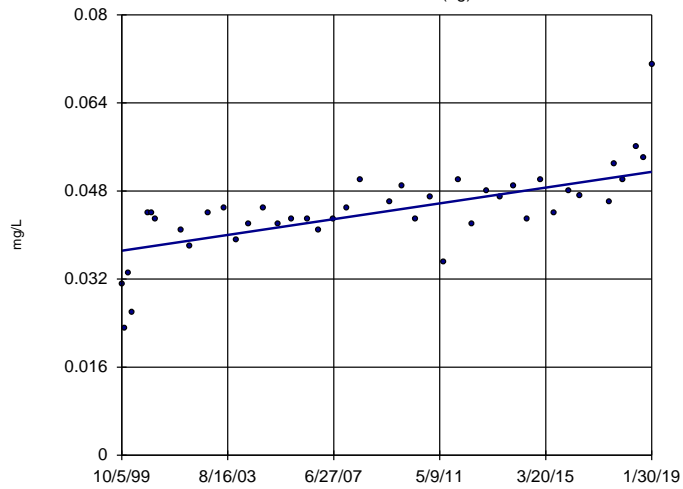
Sanitas™ v.9.6.12 Software licensed to GEI Consultants, Inc. P.C. UG

Sen's Slope Estimator GWC-5



Sen's Slope Estimator

GWA-3A (bg)

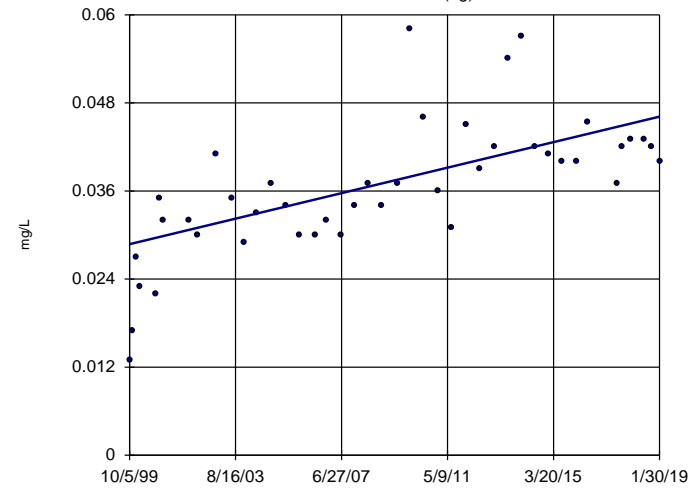


n = 42
Slope = 0.0007401
units per year.
Mann-Kendall
normal approx. =
5.394
critical = 2.33
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Barium, Total Analysis Run 4/8/2019 10:47 AM
Plant McIntosh Client: GEI Data: McIntosh No 3

Sen's Slope Estimator

GWA-4 (bg)



n = 43
Slope = 0.0008992
units per year.
Mann-Kendall
normal approx. =
5.244
critical = 2.33
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Barium, Total Analysis Run 4/8/2019 10:47 AM
Plant McIntosh Client: GEI Data: McIntosh No 3

Box & Whiskers Plot - All Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/10/2019, 11:07 AM

Constituent	Well	N	Mean	Std. Dev.	Median	%NDs
Barium (mg/L)	GWA-1A (bg)	45	0.06516	0.05121	0.043	0
Barium (mg/L)	GWA-2A (bg)	44	0.04645	0.03478	0.0385	0
Barium (mg/L)	GWA-2B (bg)	2	0.045	0.005657	0.045	0
Barium (mg/L)	GWA-3A (bg)	45	0.04487	0.008079	0.044	0
Barium (mg/L)	GWA-3B (bg)	33	0.07239	0.02025	0.073	0
Barium (mg/L)	GWA-4 (bg)	46	0.03694	0.009121	0.037	0
Barium (mg/L)	GWA-5 (bg)	45	0.09831	0.04216	0.095	0
Barium (mg/L)	GWA-7 (bg)	45	0.06907	0.08735	0.028	0
Barium (mg/L)	GWC-1	46	0.07204	0.04484	0.069	0
Barium (mg/L)	GWC-2	46	0.06475	0.01181	0.063	0
Barium (mg/L)	GWC-3	42	0.043	0.009936	0.04	0
Barium (mg/L)	GWC-4A	46	0.05078	0.01784	0.052	0
Barium (mg/L)	GWC-5	45	0.2967	0.1432	0.25	0
Barium (mg/L)	GWC-6	44	0.0416	0.009372	0.0415	0
Beryllium (mg/L)	GWA-1A (bg)	45	0.002171	0.0007694	0.0025	84.44
Beryllium (mg/L)	GWA-2A (bg)	44	0.002197	0.0007589	0.0025	81.82
Beryllium (mg/L)	GWA-2B (bg)	2	0.0022	0.0004243	0.0022	50
Beryllium (mg/L)	GWA-3A (bg)	46	0.002084	0.0008483	0.0025	78.26
Beryllium (mg/L)	GWA-3B (bg)	35	0.002158	0.0007735	0.0025	85.71
Beryllium (mg/L)	GWA-4 (bg)	46	0.002189	0.0007581	0.0025	86.96
Beryllium (mg/L)	GWA-5 (bg)	46	0.002209	0.0007612	0.0025	78.26
Beryllium (mg/L)	GWA-7 (bg)	44	0.002232	0.0008461	0.0025	79.55
Beryllium (mg/L)	GWC-1	46	0.002422	0.0003	0.0025	93.48
Beryllium (mg/L)	GWC-2	46	0.002162	0.0007703	0.0025	84.78
Beryllium (mg/L)	GWC-3	46	0.002217	0.0007415	0.0025	84.78
Beryllium (mg/L)	GWC-4A	46	0.002339	0.0005436	0.0025	91.3
Beryllium (mg/L)	GWC-5	46	0.002056	0.0007636	0.0025	73.91
Beryllium (mg/L)	GWC-6	45	0.002118	0.0008066	0.0025	84.44
Chromium (mg/L)	GWA-1A (bg)	45	0.01179	0.01213	0.0075	13.33
Chromium (mg/L)	GWA-2A (bg)	43	0.005023	0.004855	0.0025	55.81
Chromium (mg/L)	GWA-2B (bg)	2	0.00275	0.0003536	0.00275	50
Chromium (mg/L)	GWA-3A (bg)	46	0.002947	0.001067	0.0025	36.96
Chromium (mg/L)	GWA-3B (bg)	33	0.002591	0.0008966	0.0025	75.76
Chromium (mg/L)	GWA-4 (bg)	45	0.002595	0.001054	0.0025	80
Chromium (mg/L)	GWA-5 (bg)	45	0.002433	0.0009594	0.0025	53.33
Chromium (mg/L)	GWA-7 (bg)	45	0.01822	0.02509	0.0077	2.222
Chromium (mg/L)	GWC-1	45	0.002445	0.000277	0.0025	95.56
Chromium (mg/L)	GWC-2	46	0.003563	0.002952	0.00265	23.91
Chromium (mg/L)	GWC-3	44	0.004109	0.003187	0.00345	15.91
Chromium (mg/L)	GWC-4A	45	0.002571	0.000519	0.0025	93.33
Chromium (mg/L)	GWC-5	45	0.002756	0.001522	0.0025	86.67
Chromium (mg/L)	GWC-6	44	0.002564	0.0008	0.0025	84.09
Cobalt (mg/L)	GWA-1A (bg)	45	0.00256	0.001579	0.0025	75.56
Cobalt (mg/L)	GWA-2A (bg)	43	0.001994	0.0008395	0.0025	69.77
Cobalt (mg/L)	GWA-2B (bg)	2	0.00475	0.000495	0.00475	0
Cobalt (mg/L)	GWA-3A (bg)	45	0.002057	0.0006741	0.0025	73.33
Cobalt (mg/L)	GWA-3B (bg)	33	0.002013	0.0007382	0.0025	72.73
Cobalt (mg/L)	GWA-4 (bg)	46	0.001997	0.0007827	0.0025	73.91
Cobalt (mg/L)	GWA-5 (bg)	45	0.002514	0.001408	0.0025	42.22
Cobalt (mg/L)	GWA-7 (bg)	45	0.003579	0.003512	0.0025	80

Box & Whiskers Plot- All Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/10/2019, 11:07 AM

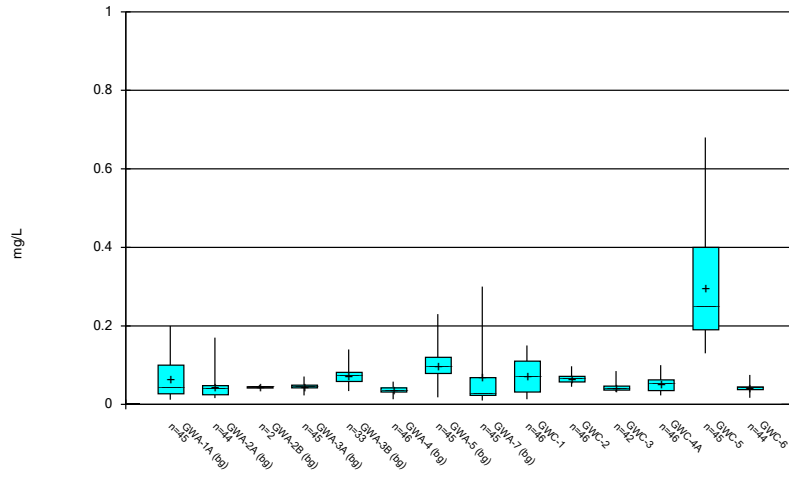
Constituent	Well	N	Mean	Std. Dev.	Median	%NDs
Cobalt (mg/L)	GWC-1	45	0.002448	0.0003458	0.0025	97.78
Cobalt (mg/L)	GWC-2	46	0.002278	0.001516	0.0025	69.57
Cobalt (mg/L)	GWC-3	46	0.002068	0.0008291	0.0025	78.26
Cobalt (mg/L)	GWC-4A	46	0.00209	0.0007893	0.0025	76.09
Cobalt (mg/L)	GWC-5	46	0.005448	0.002956	0.00495	26.09
Cobalt (mg/L)	GWC-6	46	0.002115	0.0007539	0.0025	80.43
Copper (mg/L)	GWA-1A (bg)	40	0.00281	0.0008463	0.0025	85
Copper (mg/L)	GWA-2A (bg)	36	0.002853	0.001813	0.0025	88.89
Copper (mg/L)	GWA-2B (bg)	1	0.0035	0	0.0035	0
Copper (mg/L)	GWA-3A (bg)	40	0.002489	0.00007115	0.0025	97.5
Copper (mg/L)	GWA-3B (bg)	27	0.002389	0.0004237	0.0025	92.59
Copper (mg/L)	GWA-4 (bg)	40	0.002562	0.0003953	0.0025	100
Copper (mg/L)	GWA-5 (bg)	40	0.003365	0.002878	0.0025	75
Copper (mg/L)	GWA-7 (bg)	39	0.003259	0.002843	0.0025	89.74
Copper (mg/L)	GWC-1	40	0.002555	0.0003479	0.0025	97.5
Copper (mg/L)	GWC-2	39	0.002551	0.0007236	0.0025	94.87
Copper (mg/L)	GWC-3	40	0.002502	0.00001581	0.0025	97.5
Copper (mg/L)	GWC-4A	40	0.002562	0.0003953	0.0025	100
Copper (mg/L)	GWC-5	40	0.002457	0.0002854	0.0025	95
Copper (mg/L)	GWC-6	40	0.002547	0.0003004	0.0025	97.5
Lead (mg/L)	GWA-1A (bg)	45	0.002602	0.0041	0.001	80
Lead (mg/L)	GWA-2A (bg)	44	0.001911	0.003531	0.001	90.91
Lead (mg/L)	GWA-2B (bg)	2	0.00064	0.0005091	0.00064	50
Lead (mg/L)	GWA-3A (bg)	46	0.0009693	0.0001457	0.001	95.65
Lead (mg/L)	GWA-3B (bg)	33	0.0009803	0.0002609	0.001	72.73
Lead (mg/L)	GWA-4 (bg)	46	0.001138	0.001007	0.001	91.3
Lead (mg/L)	GWA-5 (bg)	46	0.001181	0.001484	0.001	80.43
Lead (mg/L)	GWA-7 (bg)	45	0.005761	0.01008	0.001	68.89
Lead (mg/L)	GWC-1	45	0.001	0	0.001	100
Lead (mg/L)	GWC-2	45	0.001078	0.0006725	0.001	95.56
Lead (mg/L)	GWC-3	45	0.001407	0.001678	0.001	88.89
Lead (mg/L)	GWC-4A	45	0.001	0	0.001	100
Lead (mg/L)	GWC-5	44	0.0009795	0.0001357	0.001	97.73
Lead (mg/L)	GWC-6	44	0.001229	0.001211	0.001	90.91
Vanadium (mg/L)	GWA-1A (bg)	40	0.009402	0.01175	0.00295	42.5
Vanadium (mg/L)	GWA-2A (bg)	35	0.005486	0.005548	0.0025	54.29
Vanadium (mg/L)	GWA-2B (bg)	1	0.0025	0	0.0025	100
Vanadium (mg/L)	GWA-3A (bg)	40	0.002497	0.0003059	0.0025	95
Vanadium (mg/L)	GWA-3B (bg)	27	0.003193	0.001967	0.0025	62.96
Vanadium (mg/L)	GWA-4 (bg)	40	0.002458	0.0002656	0.0025	95
Vanadium (mg/L)	GWA-5 (bg)	39	0.003187	0.004431	0.0025	79.49
Vanadium (mg/L)	GWA-7 (bg)	38	0.01829	0.02995	0.0025	52.63
Vanadium (mg/L)	GWC-1	40	0.002595	0.0006008	0.0025	97.5
Vanadium (mg/L)	GWC-2	40	0.002865	0.002063	0.0025	90
Vanadium (mg/L)	GWC-3	40	0.004025	0.004804	0.0025	90
Vanadium (mg/L)	GWC-4A	40	0.0025	0	0.0025	100
Vanadium (mg/L)	GWC-5	40	0.00432	0.007098	0.0025	87.5
Vanadium (mg/L)	GWC-6	39	0.00249	0.00006405	0.0025	97.44
Zinc (mg/L)	GWA-1A (bg)	40	0.0249	0.01853	0.02	30
Zinc (mg/L)	GWA-2A (bg)	37	0.03299	0.02809	0.02	8.108

Box & Whiskers Plot- All Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/10/2019, 11:07 AM

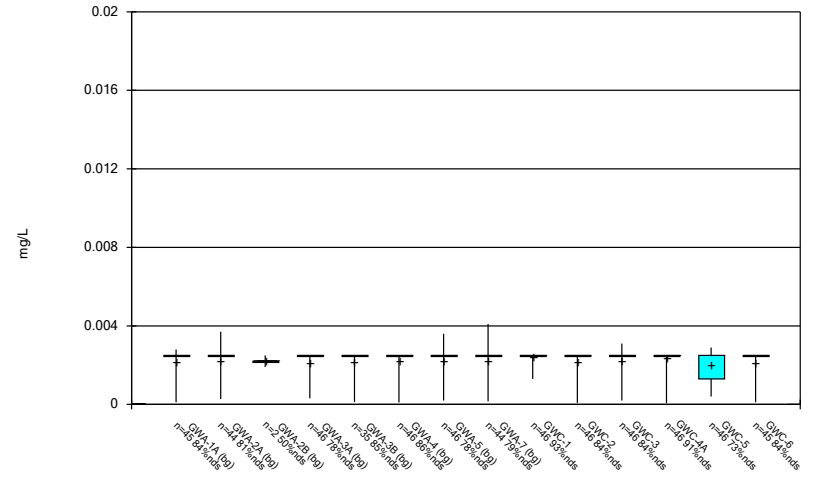
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Median</u>	<u>%NDs</u>
Zinc (mg/L)	GWA-2B (bg)	1	0.013	0	0.013	0
Zinc (mg/L)	GWA-3A (bg)	38	0.01241	0.007904	0.014	47.37
Zinc (mg/L)	GWA-3B (bg)	27	0.01721	0.0123	0.02	51.85
Zinc (mg/L)	GWA-4 (bg)	40	0.01532	0.01056	0.012	17.5
Zinc (mg/L)	GWA-5 (bg)	39	0.01992	0.01703	0.013	20.51
Zinc (mg/L)	GWA-7 (bg)	38	0.02881	0.02855	0.02	36.84
Zinc (mg/L)	GWC-1	40	0.01237	0.008055	0.0175	52.5
Zinc (mg/L)	GWC-2	40	0.01404	0.01159	0.00985	27.5
Zinc (mg/L)	GWC-3	40	0.01154	0.008717	0.0061	27.5
Zinc (mg/L)	GWC-4A	39	0.01237	0.008474	0.0066	43.59
Zinc (mg/L)	GWC-5	40	0.01865	0.009344	0.016	10
Zinc (mg/L)	GWC-6	34	0.01276	0.00704	0.0125	32.35

Box & Whiskers Plot



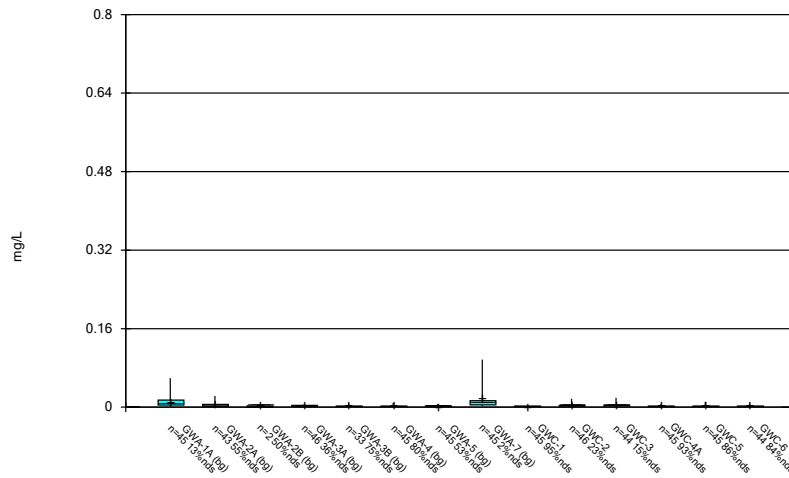
Constituent: Barium Analysis Run 6/10/2019 11:07 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



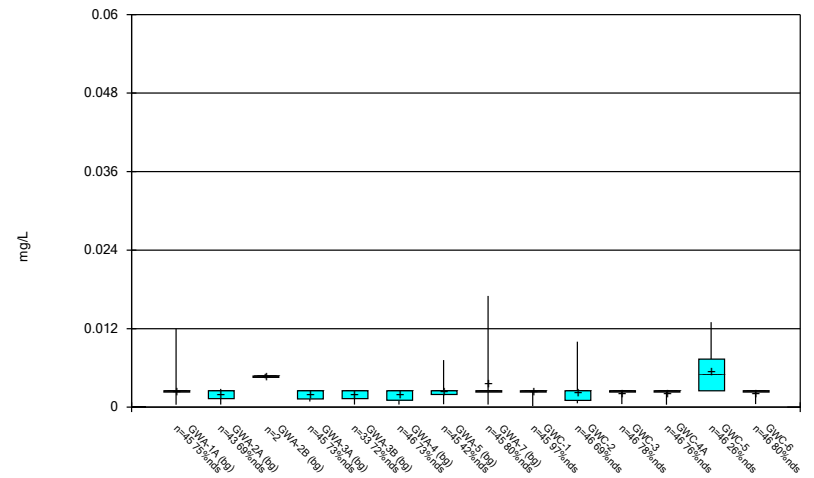
Constituent: Beryllium Analysis Run 6/10/2019 11:07 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



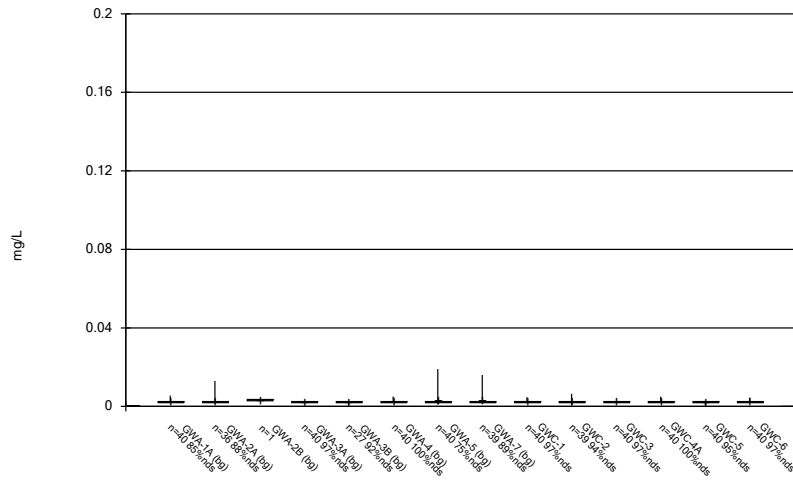
Constituent: Chromium Analysis Run 6/10/2019 11:07 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



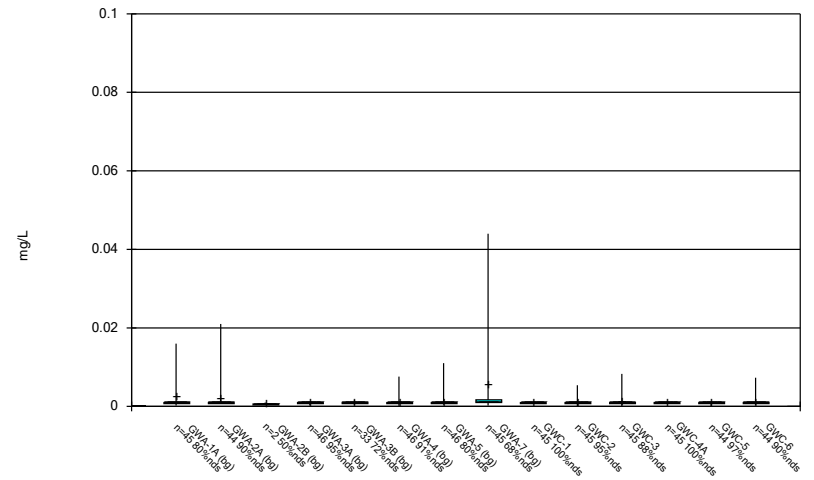
Constituent: Cobalt Analysis Run 6/10/2019 11:07 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



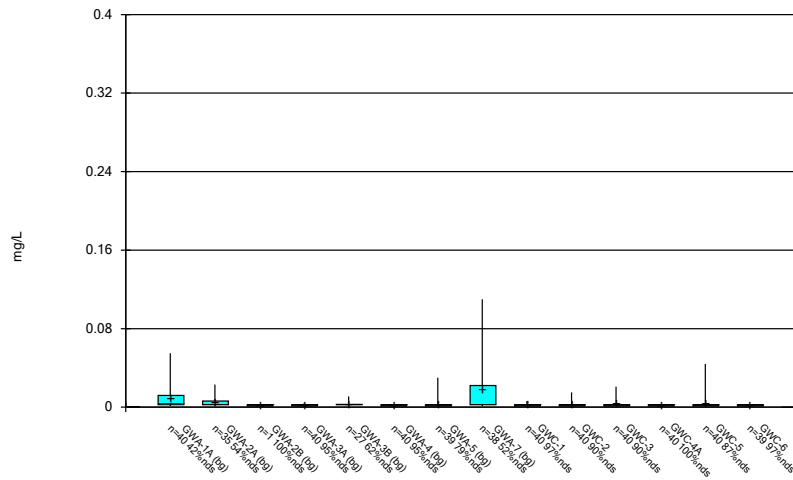
Constituent: Copper Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



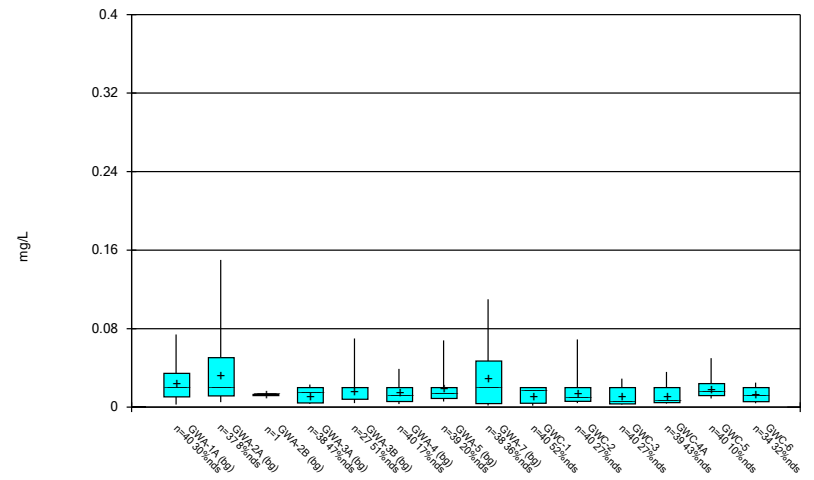
Constituent: Lead Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Vanadium Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Zinc Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Georgia Power Company
2019 Annual Groundwater Monitoring and Corrective Action
Report
Plant McIntosh Inactive Landfill No. 3
Permit No. 051-008D(L)(I)
August 2019

Appendix D2

Sanitas™ Outputs for State Compliance Parameters - March 2019

Prediction Limit - Significant Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 8/9/2019, 12:31 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Barium (mg/L)	GWA-3A	0.05794	n/a	3/28/2019	0.068	Yes	44	0	No	0.001254	Param Intra 1 of 2
Chromium (mg/L)	GWC-2	0.004616	n/a	3/28/2019	0.0048	Yes	41	24.39	sqrt(x)	0.001254	Param Intra 1 of 2
Cobalt (mg/L)	GWC-5	0.012	n/a	3/28/2019	0.013	Yes	45	26.67	n/a	0.0009557	NP Intra (normality) 1 of 2

Prediction Limit - All Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 8/9/2019, 12:31 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Barium (mg/L)	GWA-1A	0.2	n/a	3/27/2019	0.021	No	44	0	n/a	0.0009963	NP Intra (normality) 1 of 2
Barium (mg/L)	GWA-2A	0.17	n/a	3/27/2019	0.039	No	43	0	n/a	0.001037	NP Intra (normality) 1 of 2
Barium (mg/L)	GWA-3A	0.05794	n/a	3/28/2019	0.068	Yes	44	0	No	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWA-3B	0.1131	n/a	3/28/2019	0.042	No	32	0	No	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWA-4	0.05454	n/a	3/28/2019	0.041	No	45	0	No	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWA-5	0.1805	n/a	3/27/2019	0.12	No	44	0	No	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWA-7	0.3	n/a	3/28/2019	0.014	No	45	0	n/a	0.0009557	NP Intra (normality) 1 of 2
Barium (mg/L)	GWC-1	0.05966	n/a	3/28/2019	0.014	No	16	0	sqrt(x)	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWC-2	0.0876	n/a	3/28/2019	0.064	No	45	0	No	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWC-3	0.085	n/a	3/28/2019	0.035	No	41	0	n/a	0.001118	NP Intra (normality) 1 of 2
Barium (mg/L)	GWC-4A	0.08521	n/a	3/28/2019	0.028	No	45	0	No	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWC-5	0.6157	n/a	3/28/2019	0.45	No	44	0	ln(x)	0.001254	Param Intra 1 of 2
Barium (mg/L)	GWC-6	0.075	n/a	3/28/2019	0.045	No	43	0	n/a	0.001037	NP Intra (normality) 1 of 2
Beryllium (mg/L)	GWA-1A	0.0028	n/a	3/27/2019	0.0025ND	No	44	86.36	n/a	0.0009963	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWA-2A	0.0037	n/a	3/27/2019	0.0025ND	No	43	83.72	n/a	0.001037	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWA-3A	0.0025	n/a	3/28/2019	0.0025ND	No	45	80	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWA-3B	0.0025	n/a	3/28/2019	0.0025ND	No	34	88.24	n/a	0.001599	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWA-4	0.0025	n/a	3/28/2019	0.0025ND	No	45	88.89	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWA-5	0.0036	n/a	3/27/2019	0.0025ND	No	45	80	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWA-7	0.0041	n/a	3/28/2019	0.0025ND	No	44	81.82	n/a	0.0009963	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWC-1	0.0025	n/a	3/28/2019	0.0025ND	No	45	95.56	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWC-2	0.0025	n/a	3/28/2019	0.0025ND	No	45	86.67	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWC-3	0.0031	n/a	3/28/2019	0.0025ND	No	45	86.67	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWC-4A	0.0025	n/a	3/28/2019	0.0025ND	No	45	93.33	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWC-5	0.0029	n/a	3/28/2019	0.0025ND	No	45	75.56	n/a	0.0009557	NP Intra (NDs) 1 of 2
Beryllium (mg/L)	GWC-6	0.0025	n/a	3/28/2019	0.0025ND	No	44	86.36	n/a	0.0009963	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWA-1A	0.02509	n/a	3/27/2019	0.0044	No	39	12.82	sqrt(x)	0.001254	Param Intra 1 of 2
Chromium (mg/L)	GWA-2A	0.023	n/a	3/27/2019	0.0025ND	No	42	54.76	n/a	0.001077	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWA-3A	0.0059	n/a	3/28/2019	0.0037	No	45	37.78	n/a	0.0009557	NP Intra (normality) 1 of 2
Chromium (mg/L)	GWA-3B	0.0041	n/a	3/28/2019	0.0025ND	No	32	78.13	n/a	0.001803	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWA-4	0.0039	n/a	3/28/2019	0.0025ND	No	43	83.72	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWA-5	0.0067	n/a	3/27/2019	0.0025ND	No	44	54.55	n/a	0.0009963	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWA-7	0.01026	n/a	3/28/2019	0.0048	No	29	6.897	No	0.001254	Param Intra 1 of 2
Chromium (mg/L)	GWC-1	0.0025	n/a	3/28/2019	0.0025ND	No	44	97.73	n/a	0.0009963	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-2	0.004616	n/a	3/28/2019	0.0048	Yes	41	24.39	sqrt(x)	0.001254	Param Intra 1 of 2
Chromium (mg/L)	GWC-3	0.004563	n/a	3/28/2019	0.0037	No	40	17.5	sqrt(x)	0.001254	Param Intra 1 of 2
Chromium (mg/L)	GWC-4A	0.0029	n/a	3/28/2019	0.0025ND	No	43	95.35	n/a	0.001037	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-5	0.0025	n/a	3/28/2019	0.0025ND	No	42	90.48	n/a	0.001077	NP Intra (NDs) 1 of 2
Chromium (mg/L)	GWC-6	0.0025	n/a	3/28/2019	0.0025ND	No	41	87.8	n/a	0.001118	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWA-1A	0.012	n/a	3/27/2019	0.0025ND	No	44	77.27	n/a	0.0009963	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWA-2A	0.0028	n/a	3/27/2019	0.0025ND	No	42	71.43	n/a	0.001077	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWA-3A	0.0025	n/a	3/28/2019	0.0025ND	No	44	75	n/a	0.0009963	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWA-3B	0.0025	n/a	3/28/2019	0.0025ND	No	32	75	n/a	0.001803	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWA-4	0.0025	n/a	3/28/2019	0.0025ND	No	45	75.56	n/a	0.0009557	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWA-5	0.0072	n/a	3/27/2019	0.0025ND	No	44	43.18	n/a	0.0009963	NP Intra (normality) 1 of 2
Cobalt (mg/L)	GWA-7	0.017	n/a	3/28/2019	0.0025ND	No	45	80	n/a	0.0009557	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWC-1	0.0025	n/a	3/28/2019	0.0025ND	No	44	100	n/a	0.0009963	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWC-2	0.01	n/a	3/28/2019	0.0025ND	No	45	71.11	n/a	0.0009557	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWC-3	0.0025	n/a	3/28/2019	0.0025ND	No	45	80	n/a	0.0009557	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	GWC-4A	0.0025	n/a	3/28/2019	0.0025ND	No	45	77.78	n/a	0.0009557	NP Intra (NDs) 1 of 2

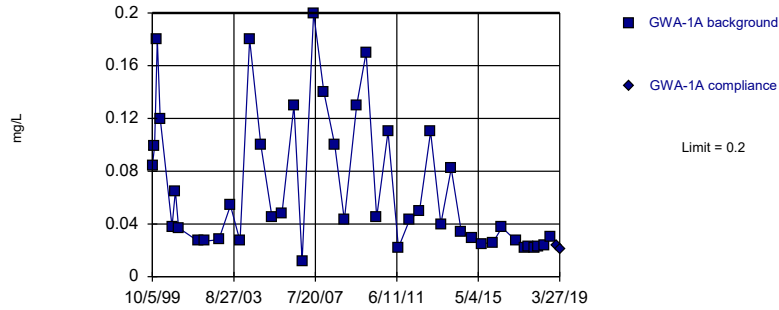
Prediction Limit - All Results

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 8/9/2019, 12:31 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	GWC-5	0.012	n/a	3/28/2019	0.013	Yes	45	26.67	n/a	0.0009557	NP Intra (normality) 1 of 2
Cobalt (mg/L)	GWC-6	0.0025	n/a	3/28/2019	0.0025ND	No	45	82.22	n/a	0.0009557	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-1A	0.0055	n/a	3/27/2019	0.0025ND	No	39	84.62	n/a	0.001226	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-2A	0.005	n/a	3/27/2019	0.0025ND	No	34	94.12	n/a	0.001599	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-3A	0.0025	n/a	3/28/2019	0.0025ND	No	39	97.44	n/a	0.001226	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-3B	0.0025	n/a	3/28/2019	0.0025ND	No	26	96.15	n/a	0.002667	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-4	0.0025	n/a	3/28/2019	0.0025ND	No	39	100	n/a	0.001226	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-5	0.0089	n/a	3/27/2019	0.0025ND	No	38	76.32	n/a	0.001294	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWA-7	0.0025	n/a	3/28/2019	0.0025ND	No	35	100	n/a	0.001497	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWC-1	0.0025	n/a	3/28/2019	0.0025ND	No	38	100	n/a	0.001294	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWC-2	0.0025	n/a	3/28/2019	0.0025ND	No	37	97.3	n/a	0.001361	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWC-3	0.0026	n/a	3/28/2019	0.0025ND	No	39	97.44	n/a	0.001226	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWC-4A	0.0025	n/a	3/28/2019	0.0025ND	No	39	100	n/a	0.001226	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWC-5	0.0026	n/a	3/28/2019	0.0025ND	No	39	94.87	n/a	0.001226	NP Intra (NDs) 1 of 2
Copper (mg/L)	GWC-6	0.0025	n/a	3/28/2019	0.0025ND	No	38	100	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-1A	0.055	n/a	3/27/2019	0.0029ND	No	39	41.03	n/a	0.001226	NP Intra (normality) 1 of 2
Vanadium (mg/L)	GWA-2A	0.023	n/a	3/27/2019	0.0025ND	No	34	52.94	n/a	0.001599	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-3A	0.0076	n/a	3/28/2019	0.0076ND	No	38	97.37	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-3B	0.011	n/a	3/28/2019	0.0028ND	No	26	65.38	n/a	0.002667	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-4	0.0025	n/a	3/28/2019	0.0025ND	No	38	97.37	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-5	0.0082	n/a	3/27/2019	0.0082ND	No	37	83.78	n/a	0.001361	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWA-7	0.11	n/a	3/28/2019	0.0063ND	No	36	55.56	n/a	0.001429	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.0063	n/a	3/28/2019	0.0042ND	No	39	97.44	n/a	0.001226	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.0062	n/a	3/28/2019	0.0059ND	No	38	92.11	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-3	0.007	n/a	3/28/2019	0.007ND	No	35	100	n/a	0.001497	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-4A	0.0025	n/a	3/28/2019	0.0025ND	No	39	100	n/a	0.001226	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-5	0.017	n/a	3/28/2019	0.007ND	No	38	89.47	n/a	0.001294	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	GWC-6	0.0047	n/a	3/28/2019	0.0047ND	No	38	97.37	n/a	0.001294	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWA-1A	0.06657	n/a	3/27/2019	0.02ND	No	39	28.21	sqrt(x)	0.001254	Param Intra 1 of 2
Zinc (mg/L)	GWA-2A	0.0975	n/a	3/27/2019	0.02ND	No	35	8.571	x^(1/3)	0.001254	Param Intra 1 of 2
Zinc (mg/L)	GWA-3A	0.02	n/a	3/28/2019	0.02ND	No	36	50	n/a	0.001429	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWA-3B	0.022	n/a	3/28/2019	0.02ND	No	25	56	n/a	0.002832	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWA-4	0.03488	n/a	3/28/2019	0.02ND	No	39	17.95	sqrt(x)	0.001254	Param Intra 1 of 2
Zinc (mg/L)	GWA-5	0.068	n/a	3/27/2019	0.02ND	No	38	21.05	n/a	0.001294	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWA-7	0.11	n/a	3/28/2019	0.02ND	No	37	37.84	n/a	0.001361	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-1	0.02	n/a	3/28/2019	0.02ND	No	39	51.28	n/a	0.001226	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWC-2	0.028	n/a	3/28/2019	0.02ND	No	38	26.32	n/a	0.001294	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-3	0.02	n/a	3/28/2019	0.02ND	No	35	31.43	n/a	0.001497	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-4A	0.02	n/a	3/28/2019	0.02ND	No	37	45.95	n/a	0.001361	NP Intra (normality) 1 of 2
Zinc (mg/L)	GWC-5	0.03869	n/a	3/28/2019	0.032	No	39	10.26	ln(x)	0.001254	Param Intra 1 of 2
Zinc (mg/L)	GWC-6	0.025	n/a	3/28/2019	0.02ND	No	33	30.3	n/a	0.001701	NP Intra (normality) 1 of 2

Within Limit

Prediction Limit
Intrawell Non-parametric

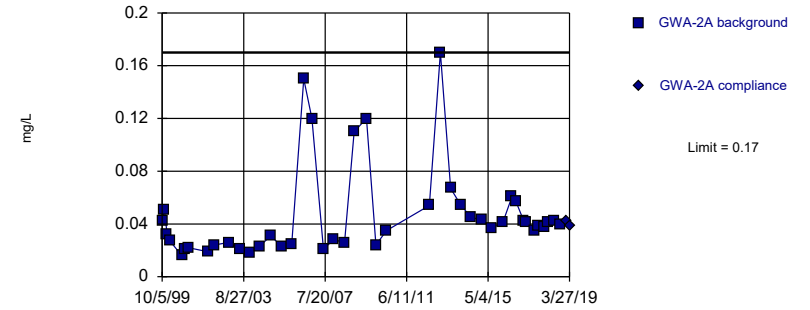


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 44 background values. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

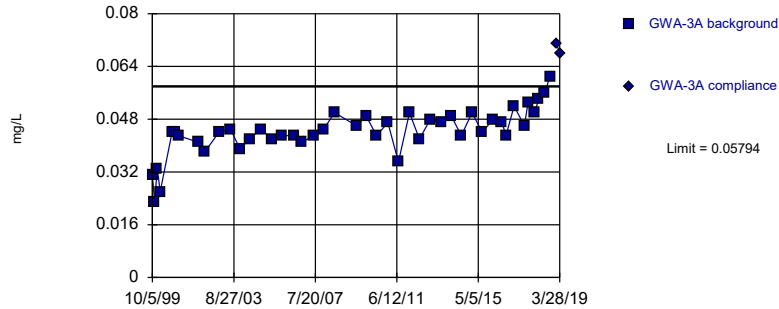


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 43 background values. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Exceeds Limit

Prediction Limit
Intrawell Parametric

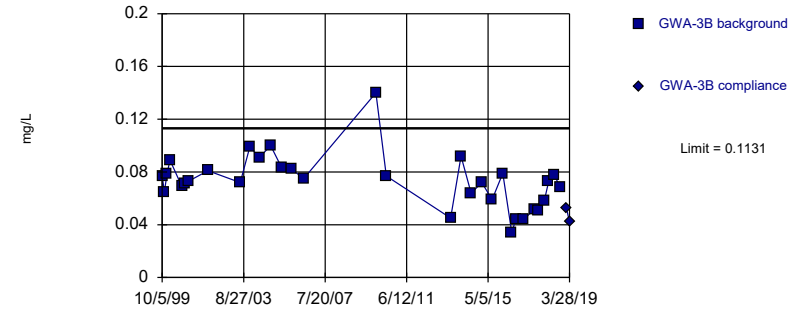


Background Data Summary: Mean=0.04428, Std. Dev.=0.007109, n=44. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.924. Kappa = 1.922 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

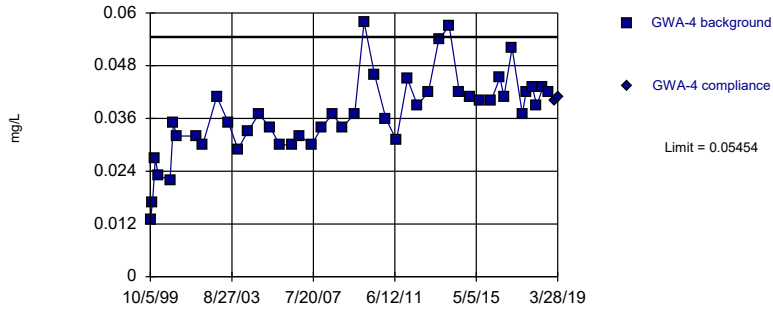


Background Data Summary: Mean=0.073, Std. Dev.=0.02027, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.941, critical = 0.904. Kappa = 1.978 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

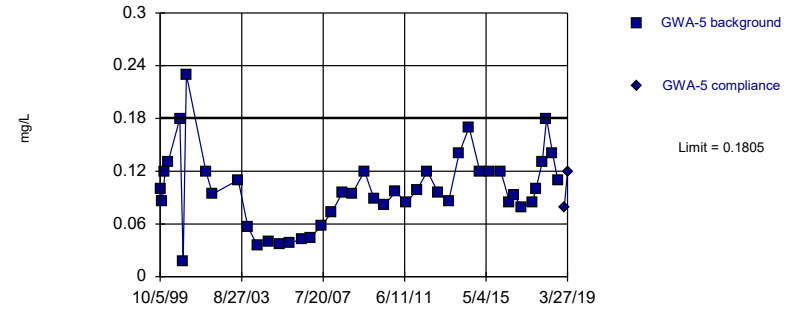


Background Data Summary: Mean=0.03687, Std. Dev.=0.009212, n=45. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9726, critical = 0.926. Kappa = 1.918 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

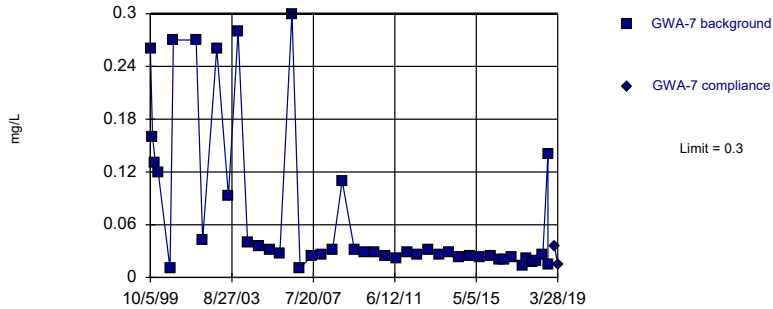


Background Data Summary: Mean=0.09875, Std. Dev.=0.04255, n=44. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9542, critical = 0.924. Kappa = 1.922 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

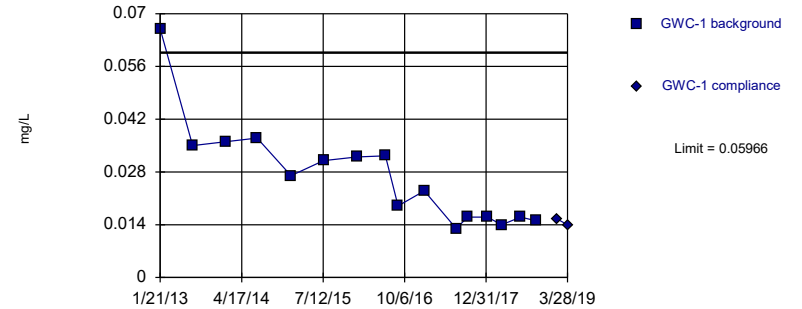


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 45 background values. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

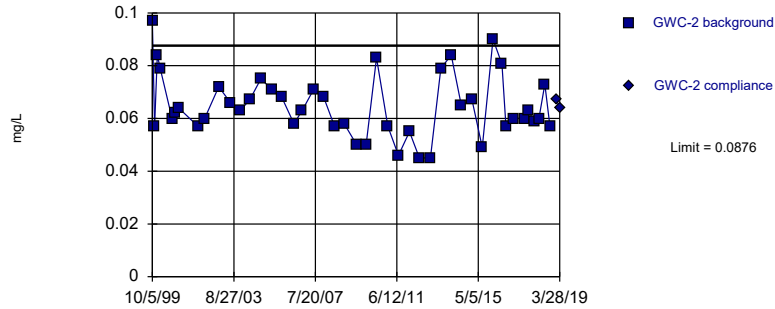


Background Data Summary (based on square root transformation): Mean=0.1593, Std. Dev.=0.03852, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8905, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Parametric

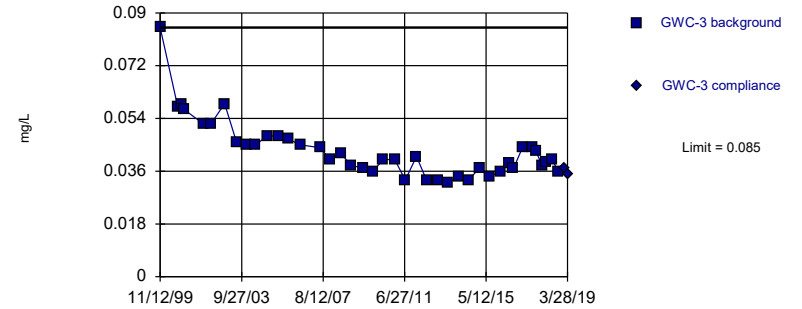


Background Data Summary: Mean=0.0647, Std. Dev.=0.01194, n=45. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.952, critical = 0.926. Kappa = 1.918 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

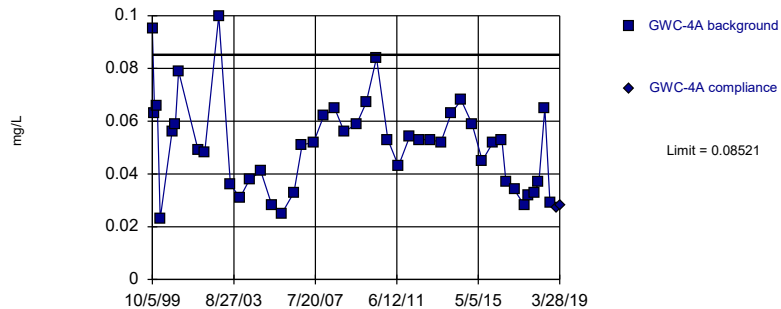


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 41 background values. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Parametric

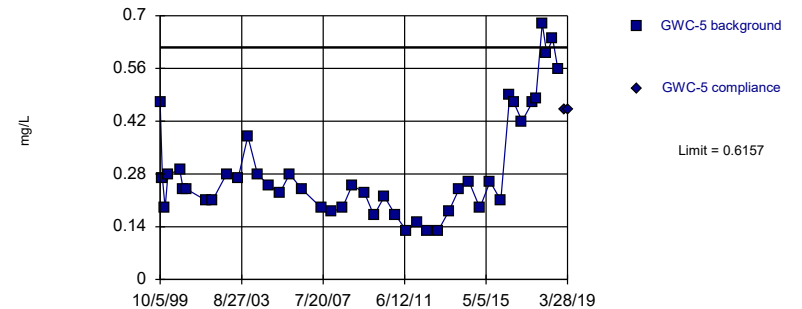


Background Data Summary: Mean=0.05131, Std. Dev.=0.01767, n=45. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9466, critical = 0.926. Kappa = 1.918 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Parametric

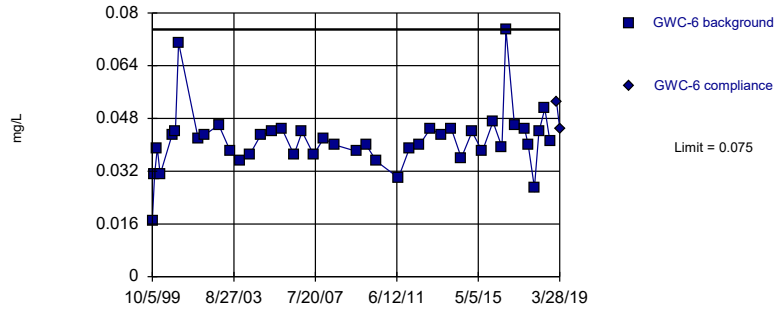


Background Data Summary (based on natural log transformation): Mean=-1.326, Std. Dev.=0.4377, n=44. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9296, critical = 0.924. Kappa = 1.922 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

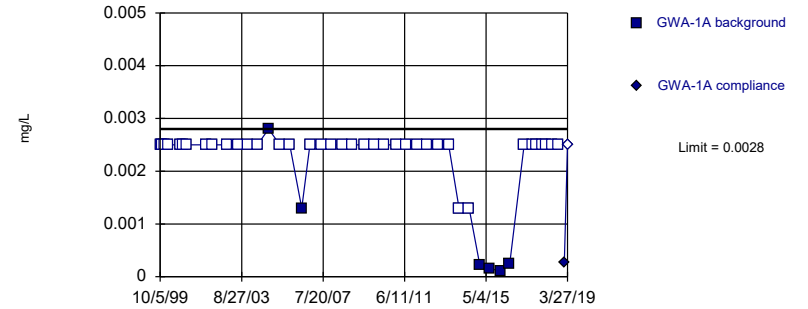


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 43 background values. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Constituent: Barium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit
Hollow symbols indicate censored values.

Prediction Limit
Intrawell Non-parametric

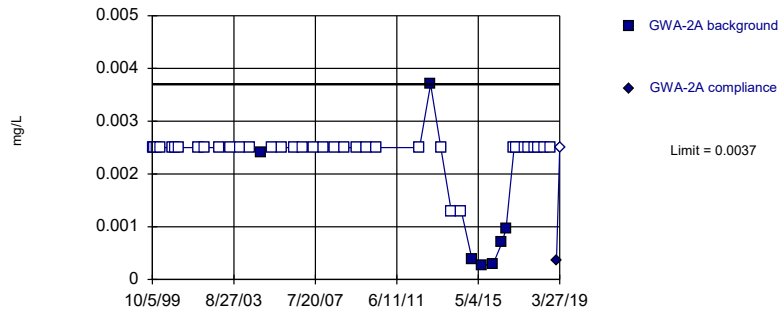


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

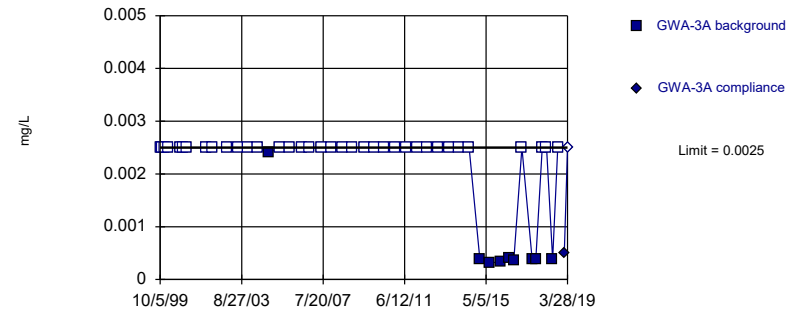


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 83.72% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

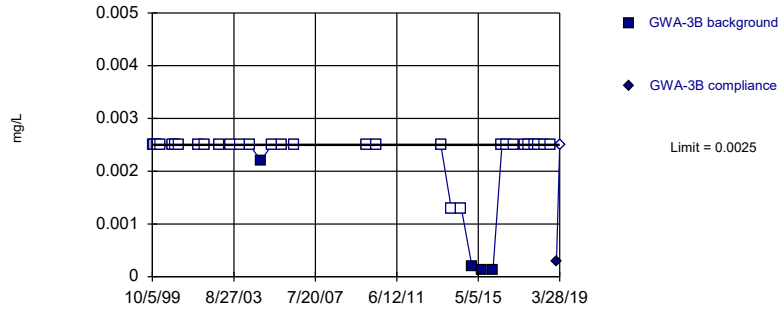


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 80% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:26 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

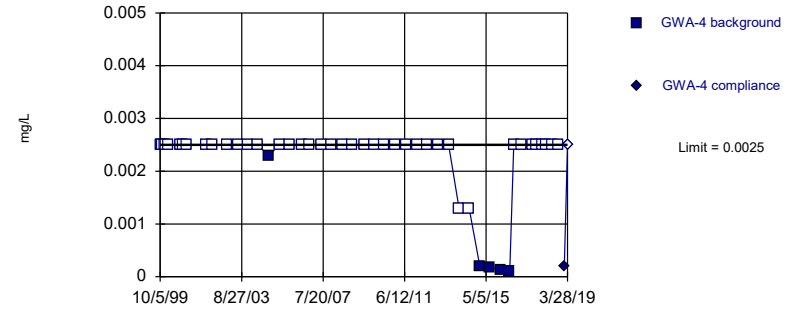


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

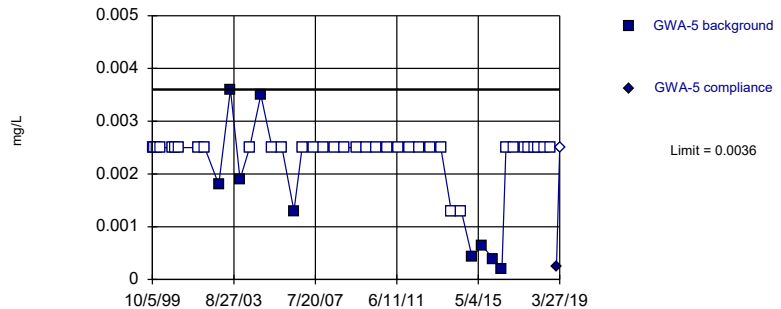


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 88.89% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

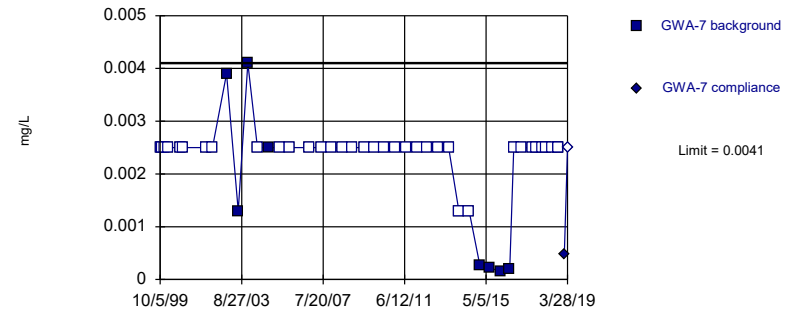


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 80% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

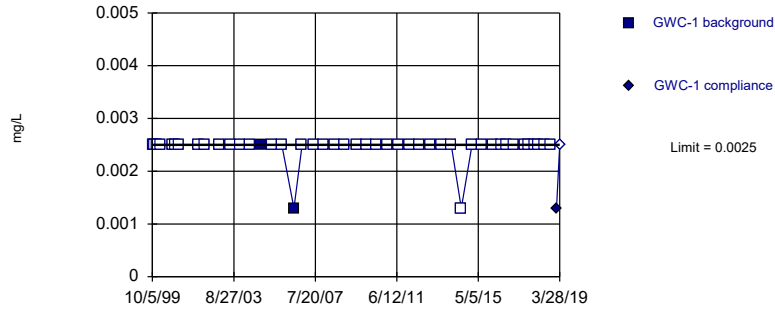


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

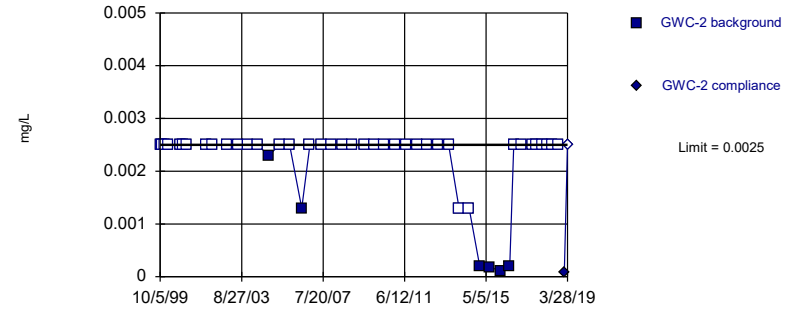


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 95.56% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

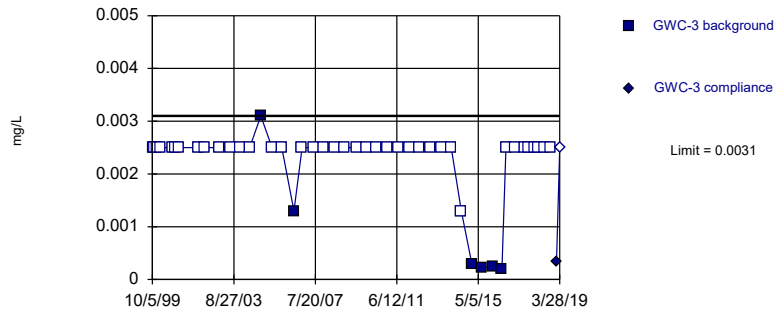


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 86.67% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

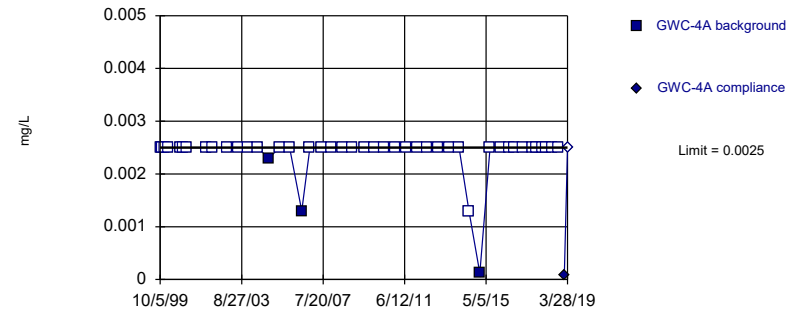


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 86.67% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

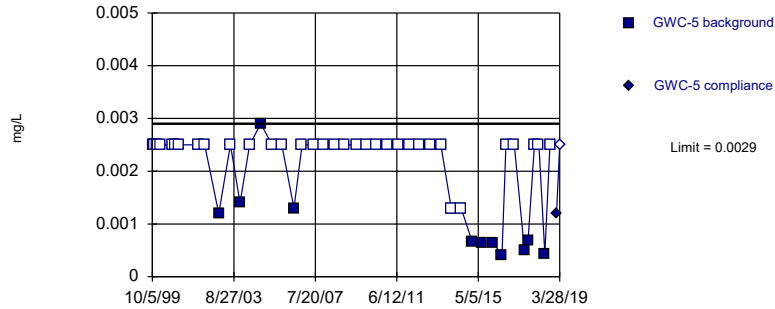


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 93.33% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

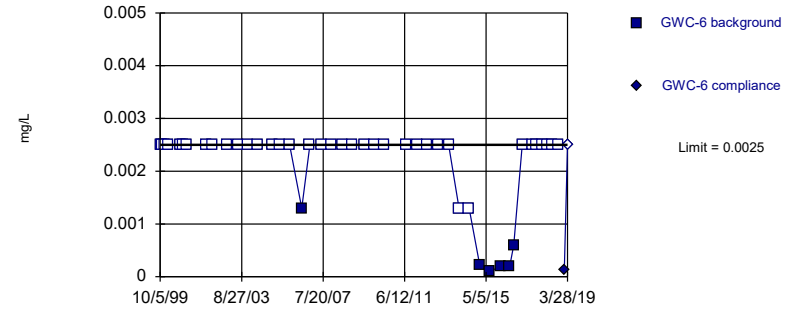


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 75.56% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

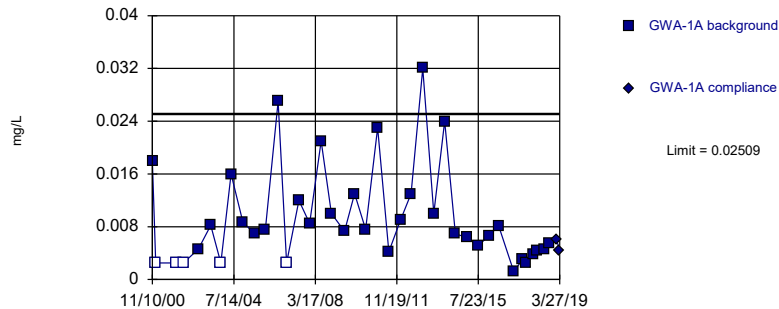


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Beryllium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

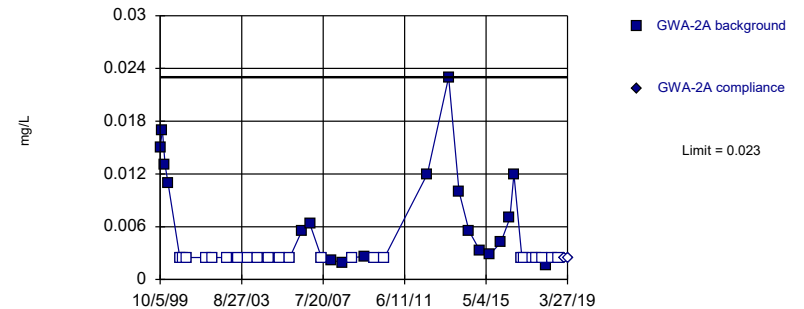


Background Data Summary (based on square root transformation): Mean=0.08981, Std. Dev.=0.0353, n=39, 12.82% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.928, critical = 0.917. Kappa = 1.942 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

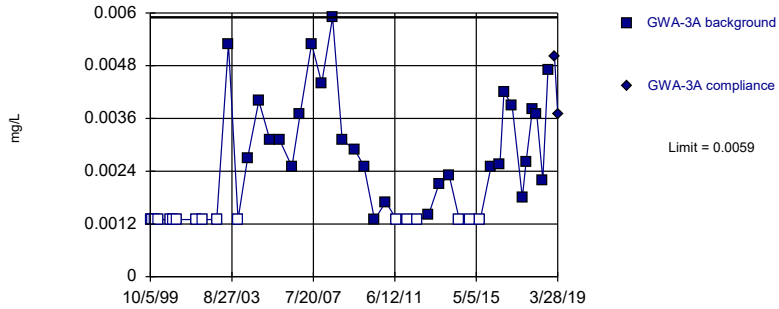


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 54.76% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

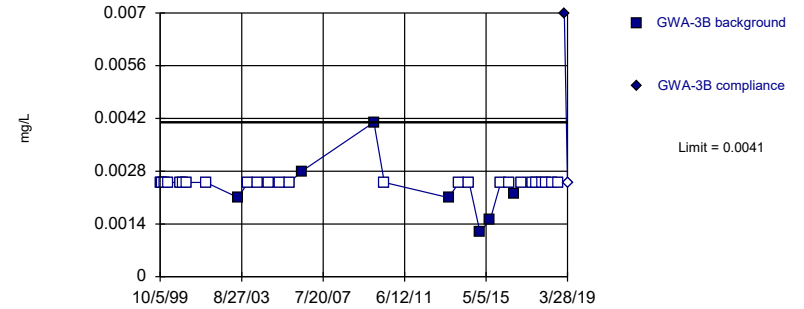


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 45 background values. 37.78% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

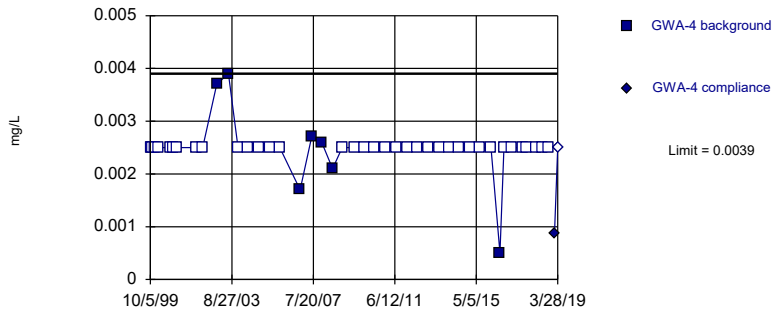


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 32 background values. 78.13% NDs. Well-constituent pair annual alpha = 0.003603. Individual comparison alpha = 0.001803 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

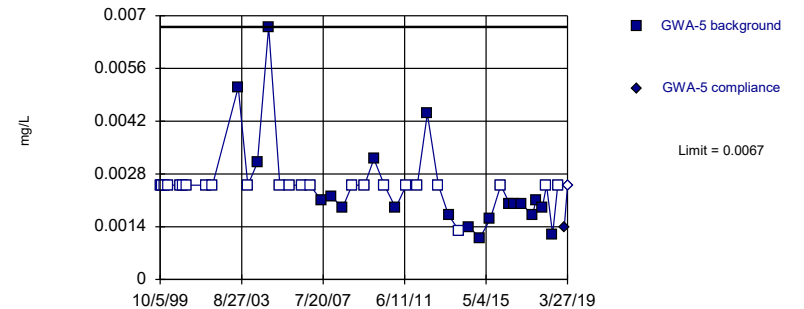


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 83.72% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

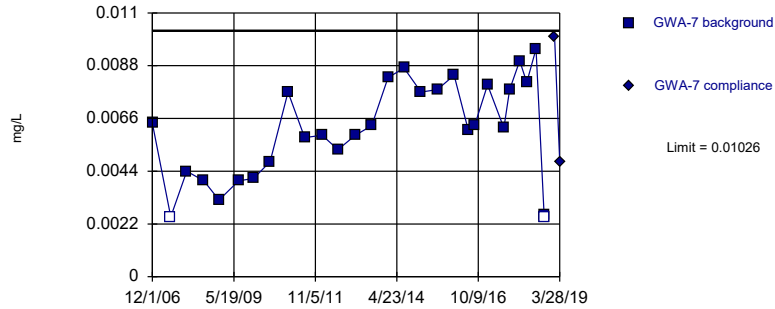


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 54.55% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

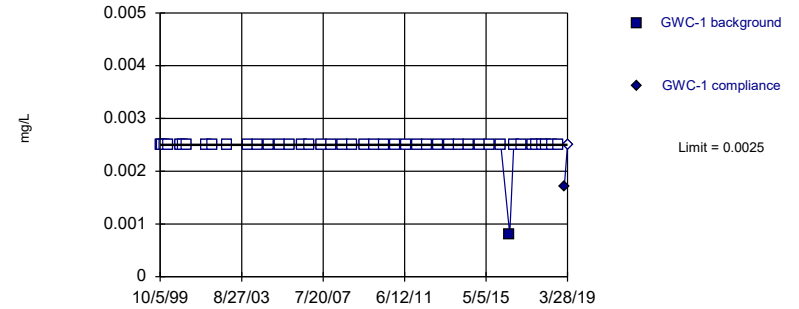


Background Data Summary: Mean=0.006114, Std. Dev.=0.002073, n=29, 6.897% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9426, critical = 0.898. Kappa = 2 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

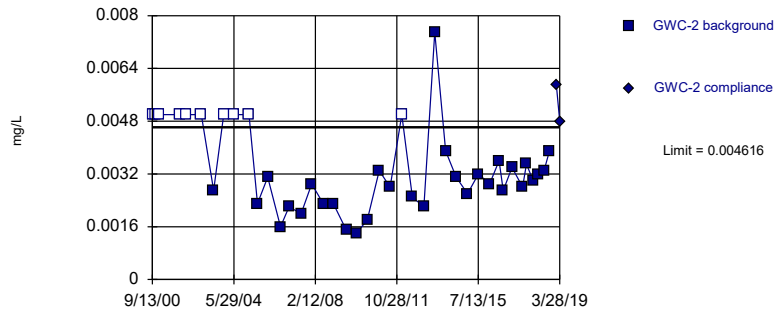


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 97.73% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Exceeds Limit

Prediction Limit
Intrawell Parametric

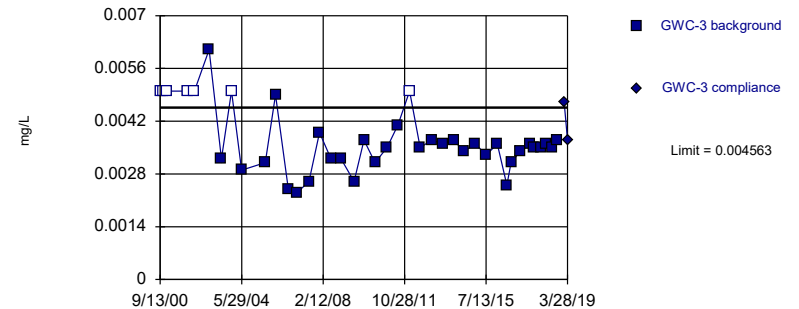


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.04977, Std. Dev.=0.009395, n=41, 24.39% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9458, critical = 0.92. Kappa = 1.934 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

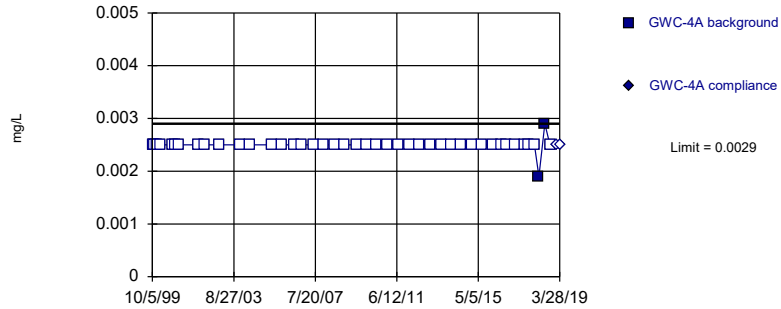


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.05484, Std. Dev.=0.00656, n=40, 17.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.923, critical = 0.919. Kappa = 1.938 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

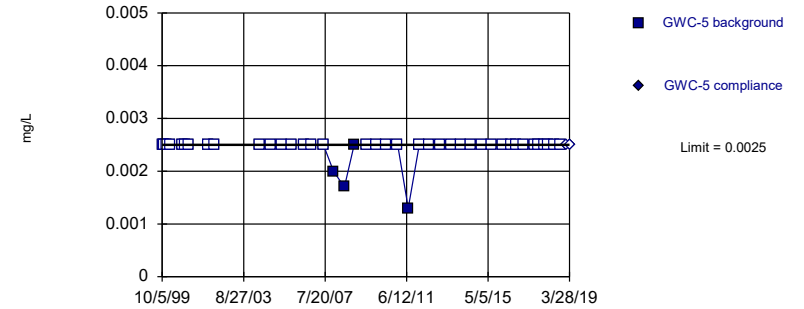


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 43 background values. 95.35% NDs. Well-constituent pair annual alpha = 0.002073. Individual comparison alpha = 0.001037 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

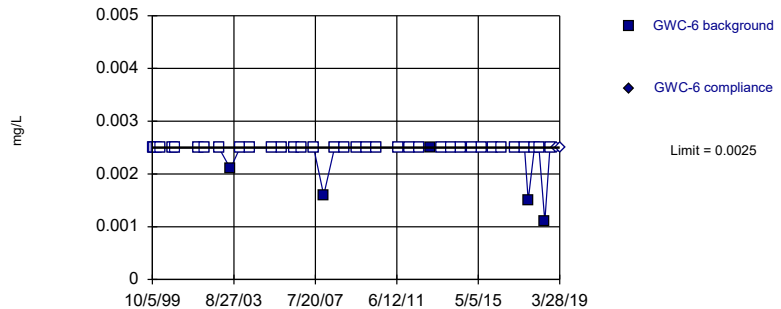


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 90.48% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

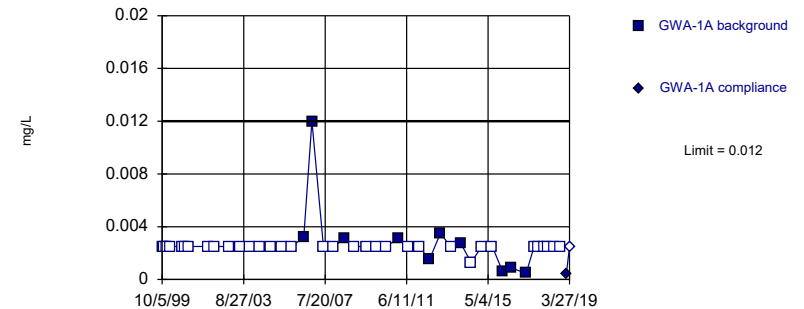


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 41 background values. 87.8% NDs. Well-constituent pair annual alpha = 0.002235. Individual comparison alpha = 0.001118 (1 of 2).

Constituent: Chromium Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

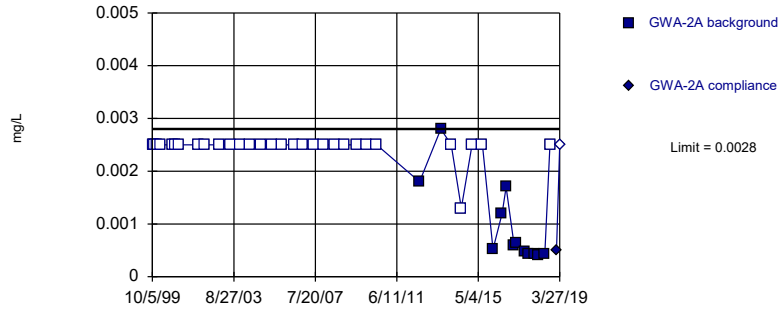


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 77.27% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

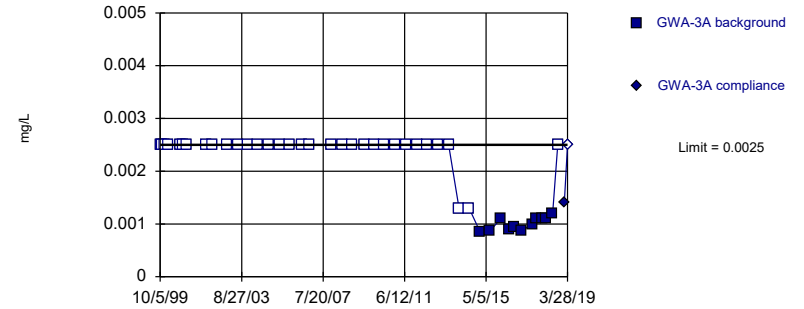


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 42 background values. 71.43% NDs. Well-constituent pair annual alpha = 0.002154. Individual comparison alpha = 0.001077 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

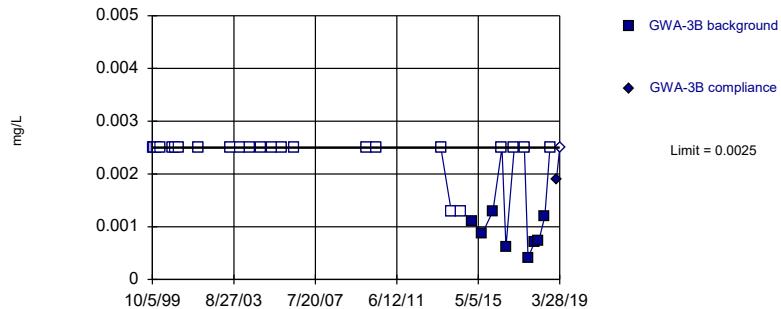


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 44 background values. 75% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

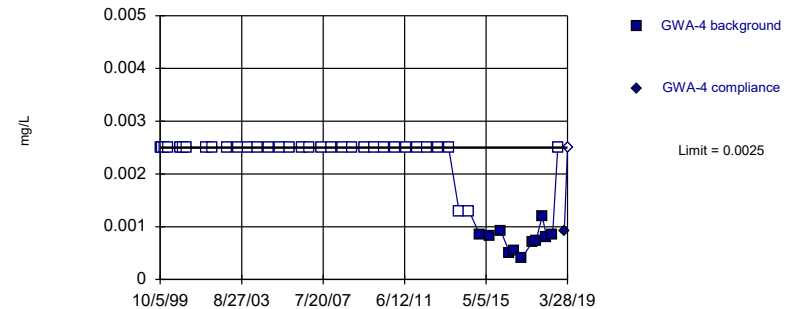


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 32 background values. 75% NDs. Well-constituent pair annual alpha = 0.003603. Individual comparison alpha = 0.001803 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

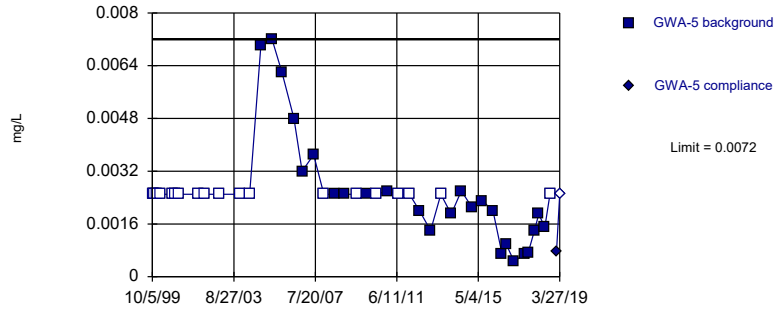


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 75.56% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

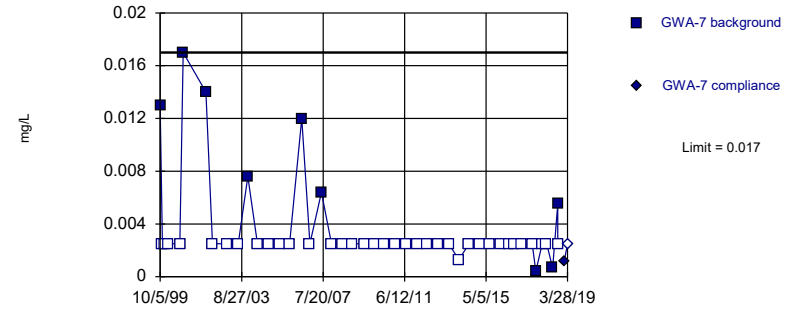


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 44 background values. 43.18% NDs. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

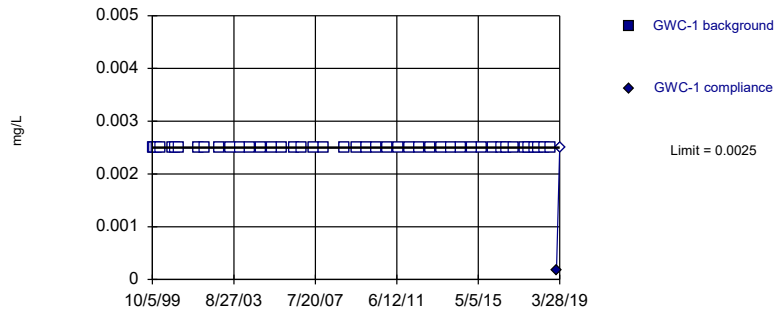


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 80% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

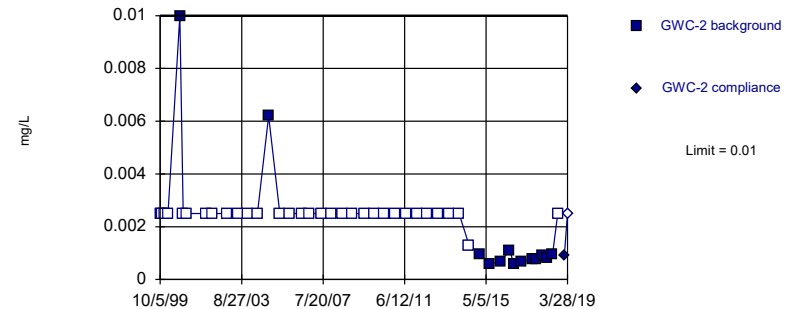


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 44) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.001992. Individual comparison alpha = 0.0009963 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

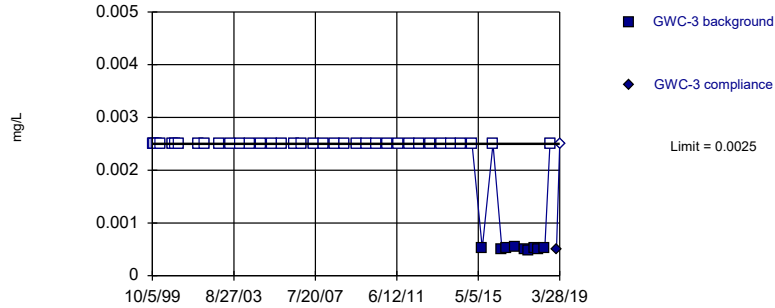


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 71.11% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

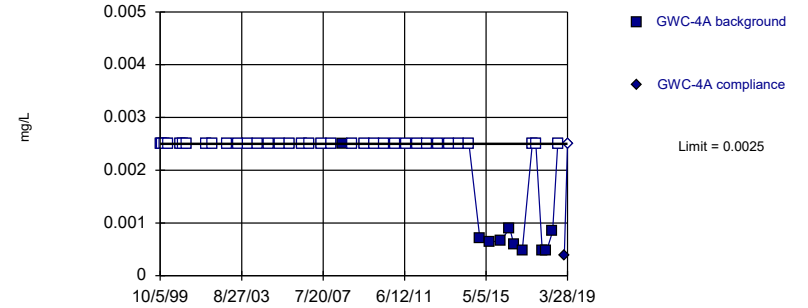


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 80% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

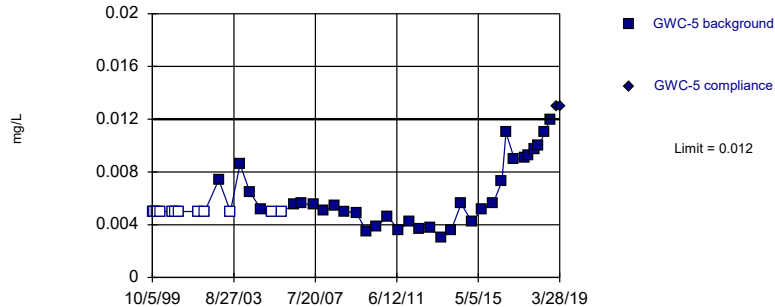


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 77.78% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Exceeds Limit

Prediction Limit
Intrawell Non-parametric

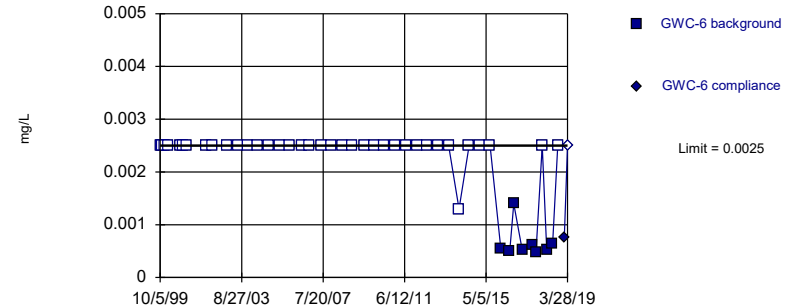


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 45 background values. 26.67% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

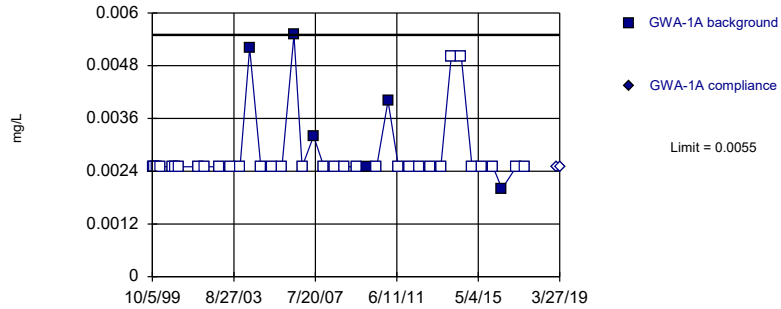


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 45 background values. 82.22% NDs. Well-constituent pair annual alpha = 0.001911. Individual comparison alpha = 0.0009557 (1 of 2).

Constituent: Cobalt Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

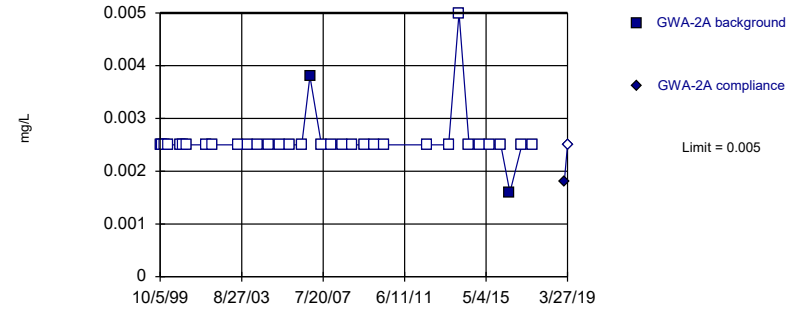


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 84.62% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

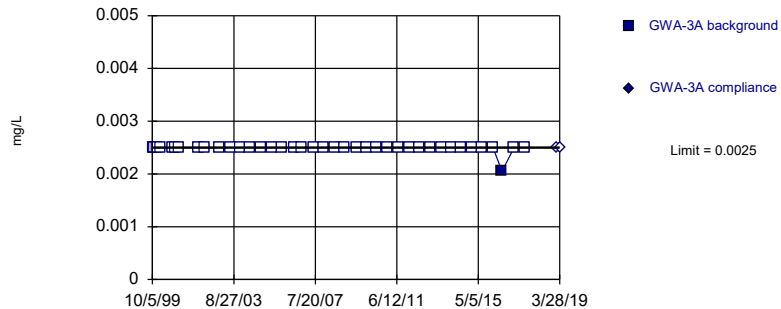


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

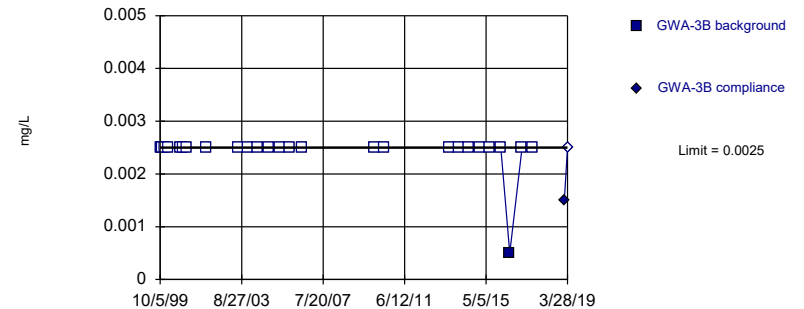


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 97.44% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit Intrawell Non-parametric

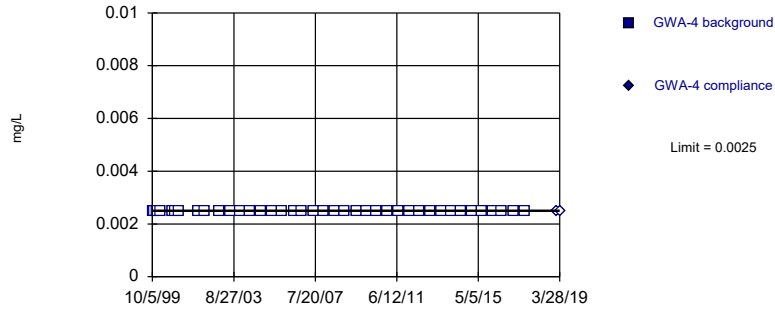


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 26 background values. 96.15% NDs. Well-constituent pair annual alpha = 0.005327. Individual comparison alpha = 0.002667 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:27 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

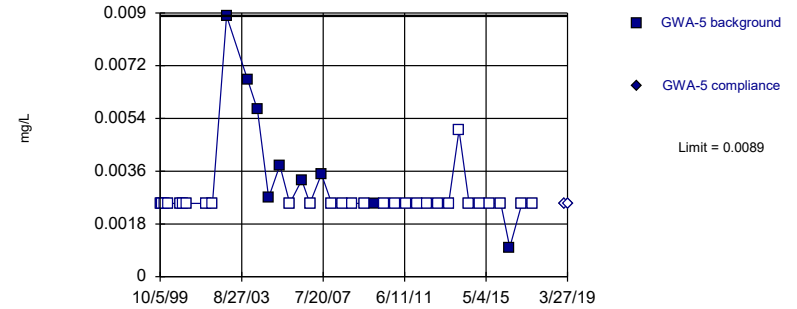


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 39) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

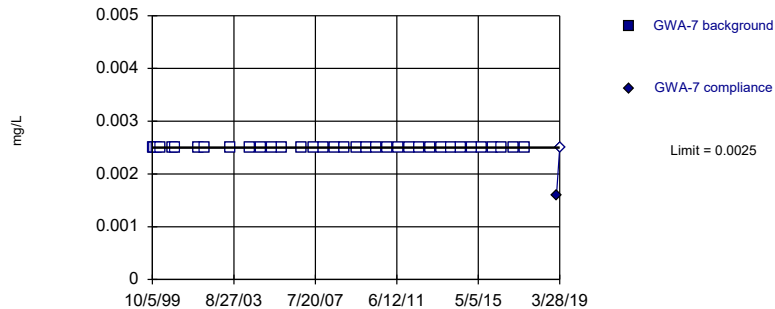


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 76.32% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

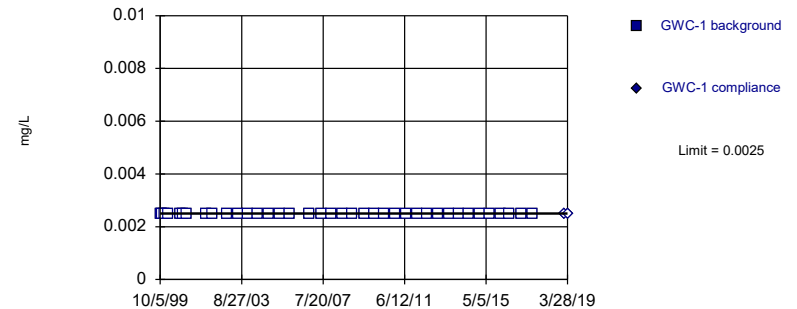


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 35) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002991. Individual comparison alpha = 0.001497 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

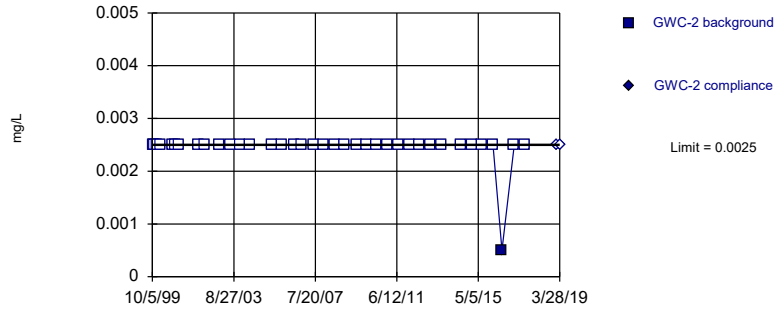


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 38) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

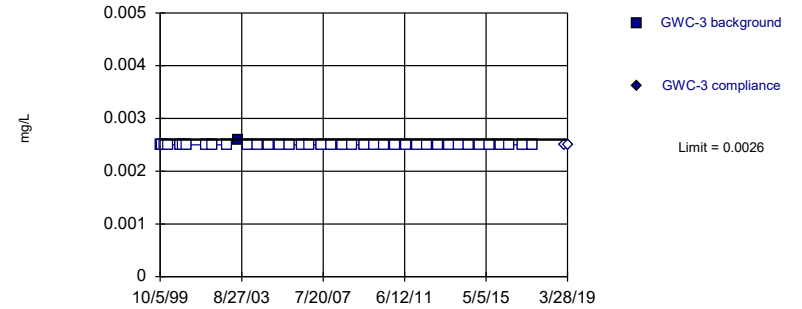


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 37 background values. 97.3% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

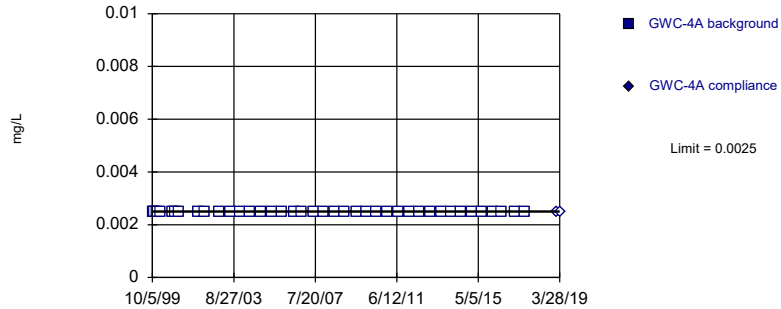


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 97.44% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

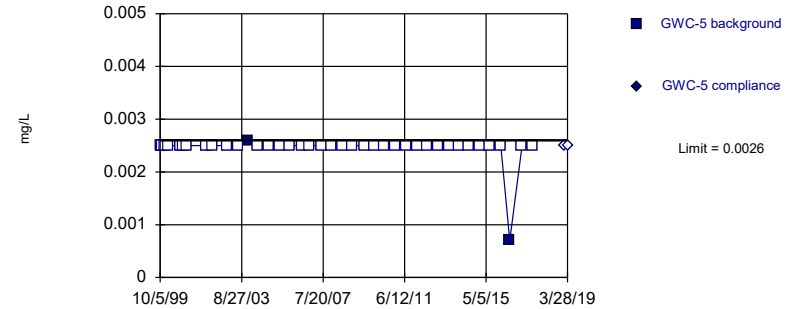


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 39) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

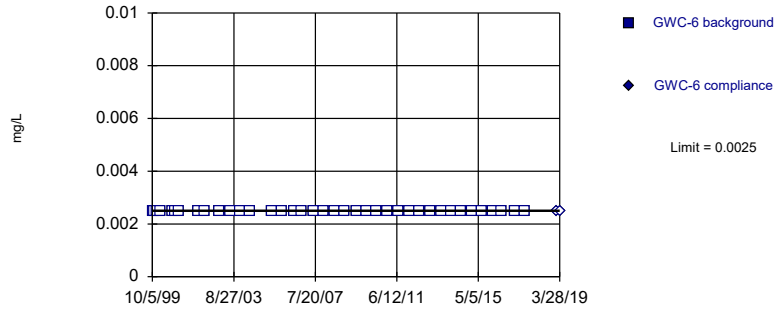


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 94.87% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

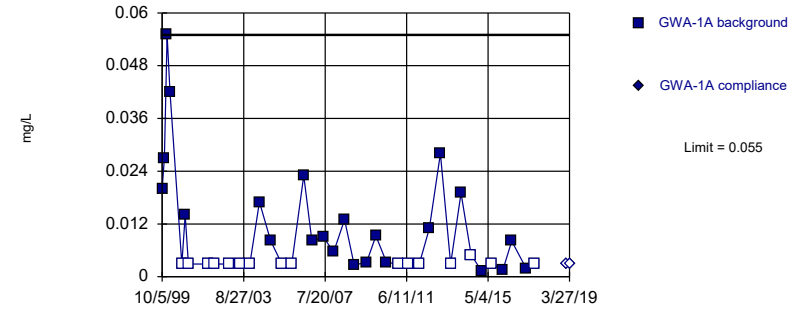


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 38) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Copper Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

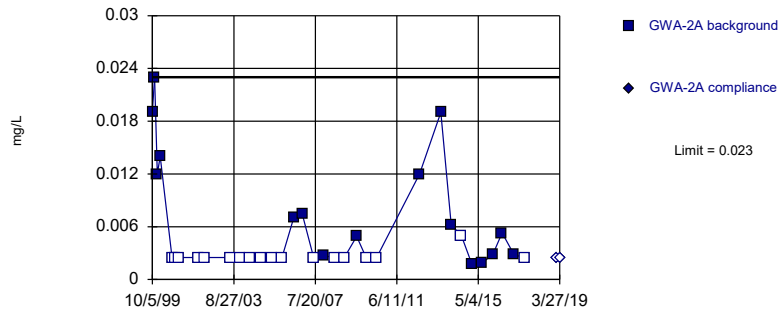


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 39 background values. 41.03% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

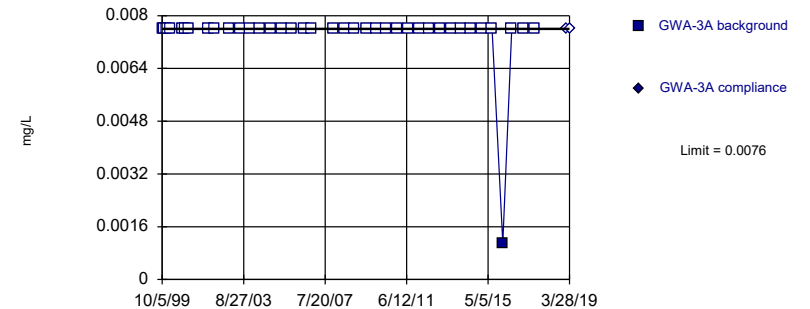


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 52.94% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

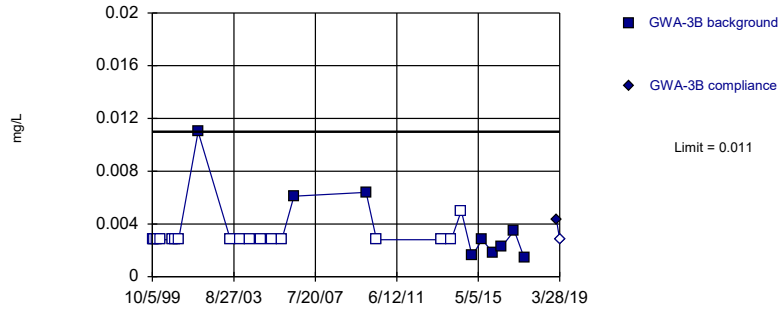


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 97.37% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

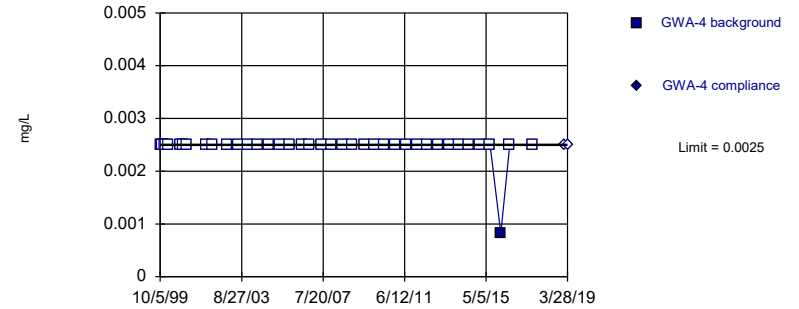


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 26 background values. 65.38% NDs. Well-constituent pair annual alpha = 0.005327. Individual comparison alpha = 0.002667 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

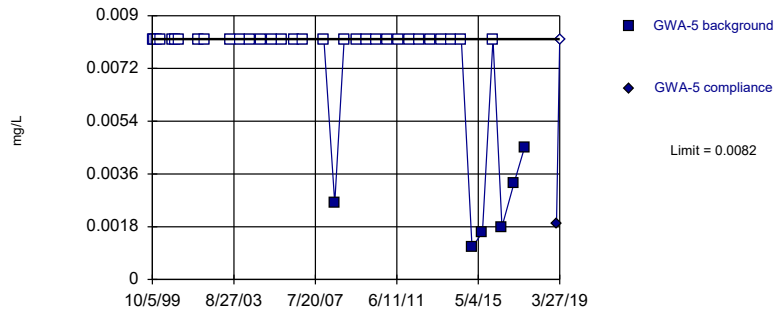


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 97.37% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

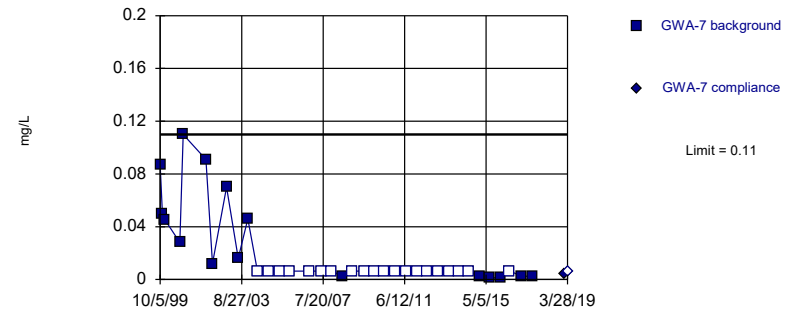


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 37 background values. 83.78% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

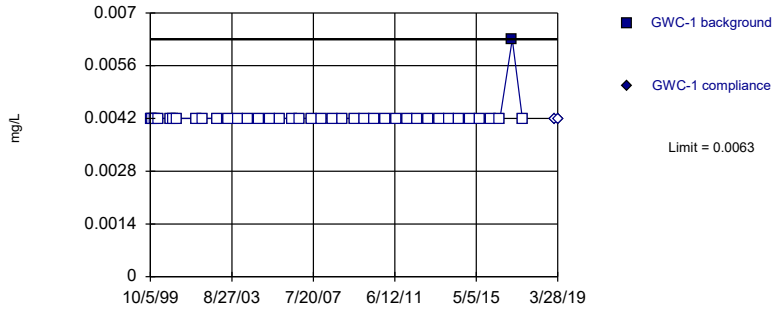


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 36 background values. 55.56% NDs. Well-constituent pair annual alpha = 0.002856. Individual comparison alpha = 0.001429 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

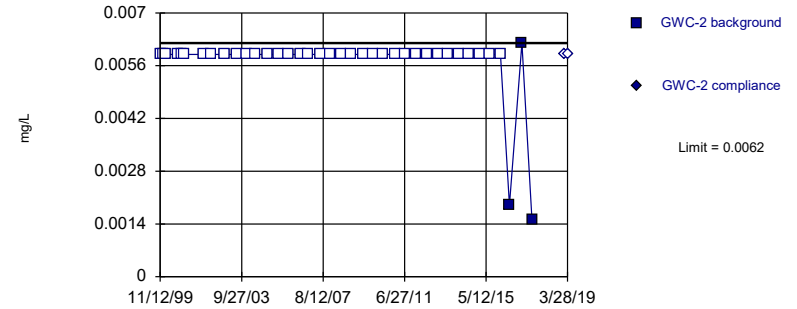


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 97.44% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

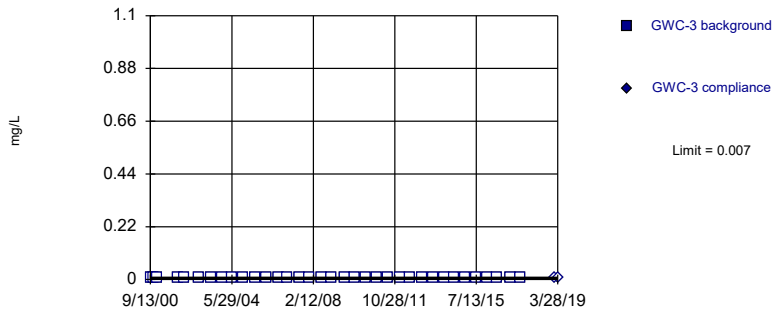


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 92.11% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

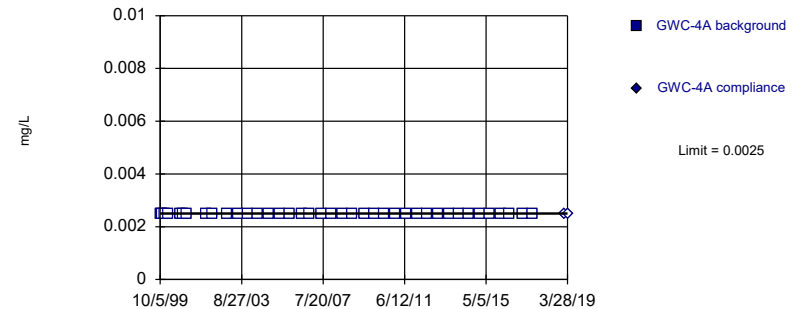


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 35) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002991. Individual comparison alpha = 0.001497 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

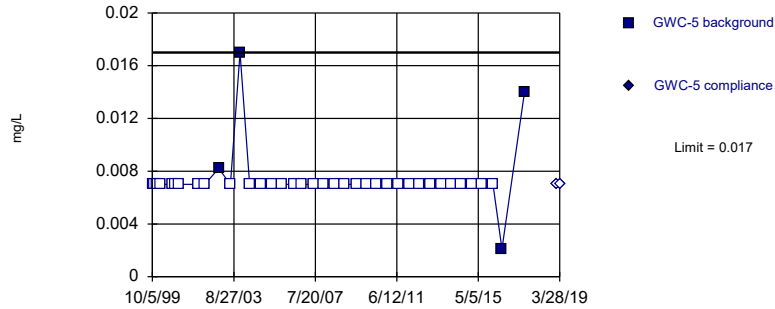


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 39) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

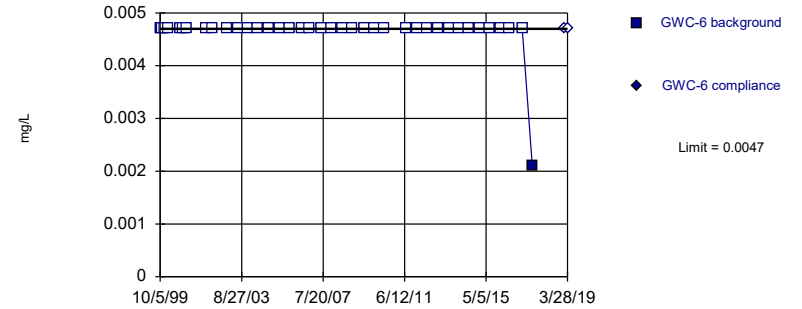


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 89.47% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

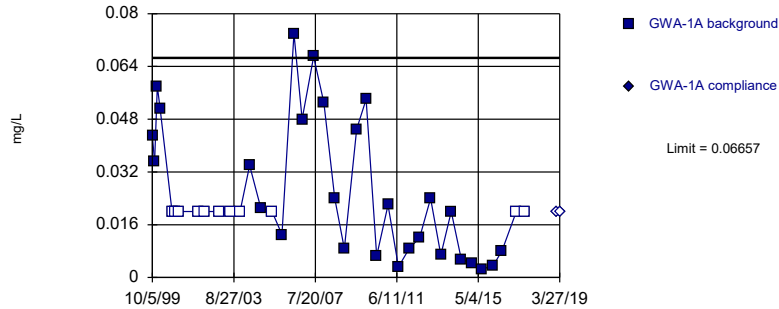


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 38 background values. 97.37% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Vanadium Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

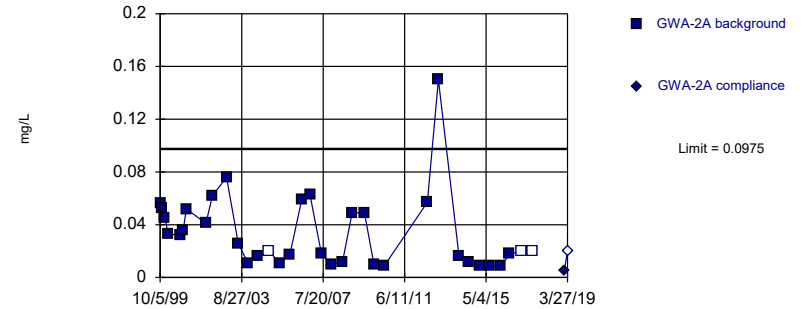


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1284, Std. Dev.=0.06673, n=39, 28.21% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.935, critical = 0.917. Kappa = 1.942 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

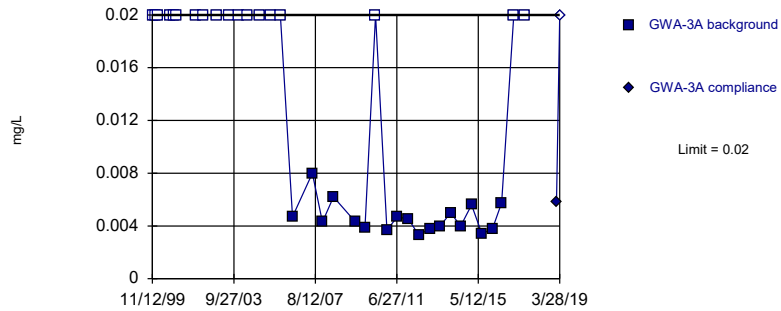


Background Data Summary (based on cube root transformation): Mean=0.3032, Std. Dev.=0.08014, n=35, 8.571% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9113, critical = 0.91. Kappa = 1.959 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

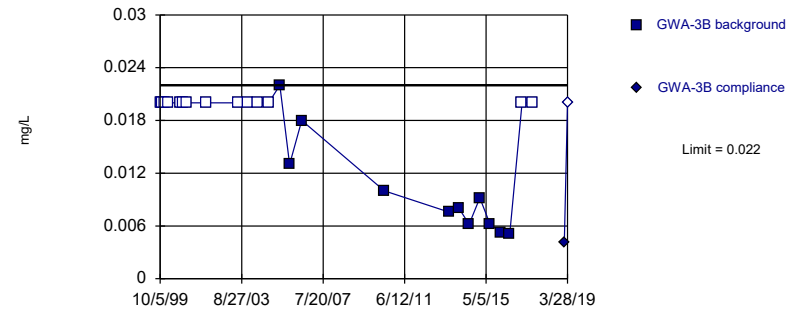


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 36 background values. 50% NDs. Well-constituent pair annual alpha = 0.002856. Individual comparison alpha = 0.001429 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

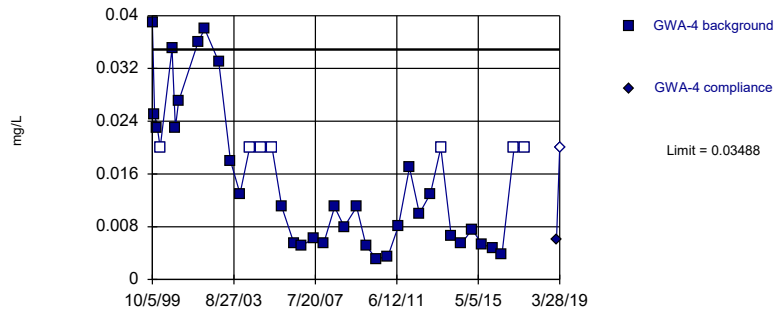


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 25 background values. 56% NDs. Well-constituent pair annual alpha = 0.005656. Individual comparison alpha = 0.002832 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Parametric

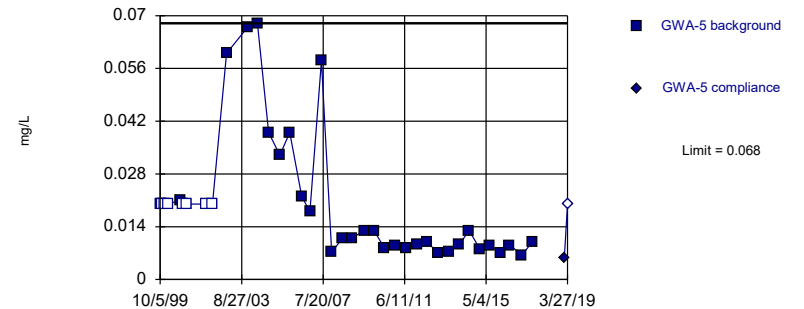


Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.1027, Std. Dev.=0.04329, n=39, 17.95% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9233, critical = 0.917. Kappa = 1.942 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

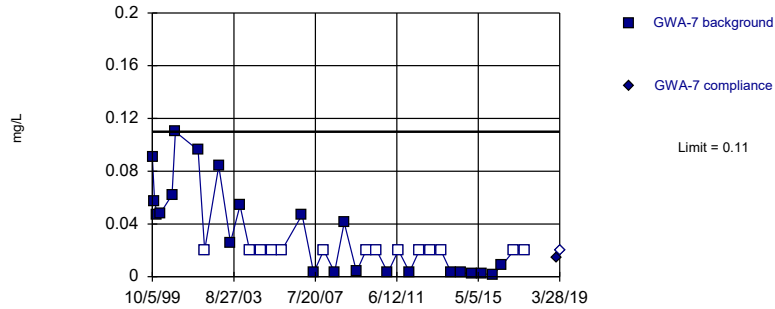


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 21.05% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

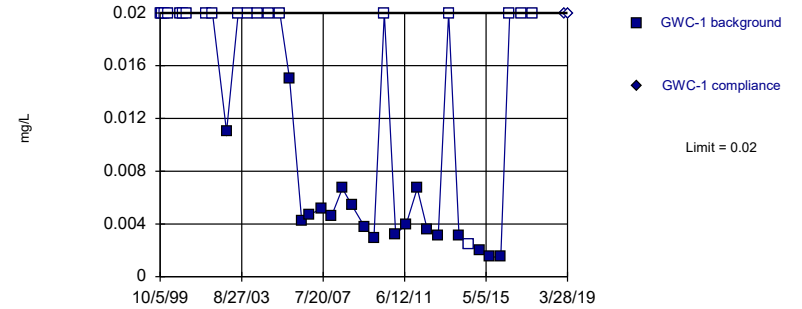


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 37 background values. 37.84% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

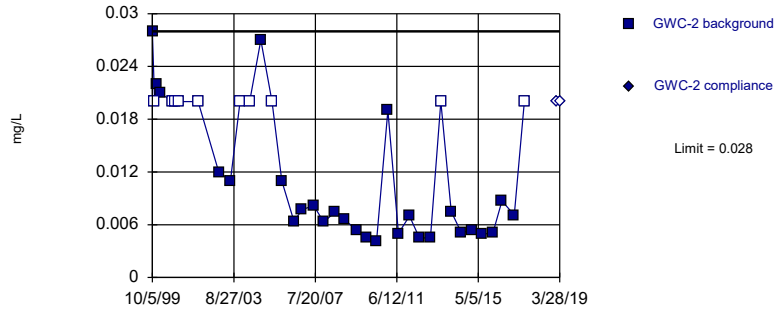


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 39 background values. 51.28% NDs. Well-constituent pair annual alpha = 0.002451. Individual comparison alpha = 0.001226 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

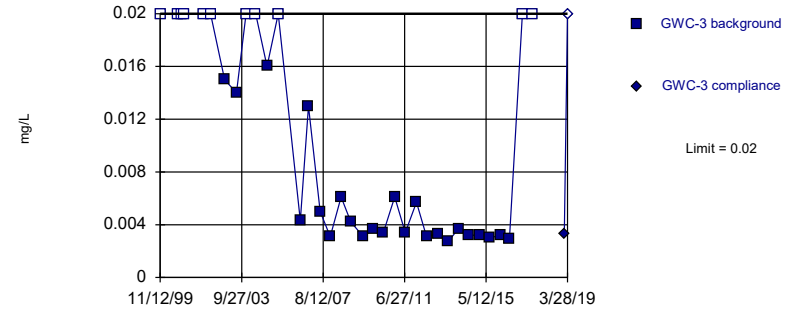


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 38 background values. 26.32% NDs. Well-constituent pair annual alpha = 0.002586. Individual comparison alpha = 0.001294 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

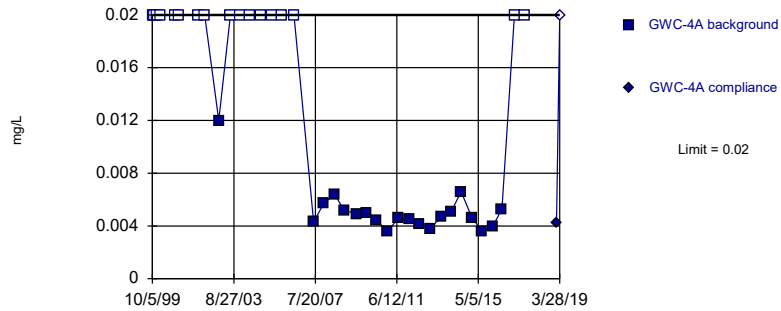


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 35 background values. 31.43% NDs. Well-constituent pair annual alpha = 0.002991. Individual comparison alpha = 0.001497 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

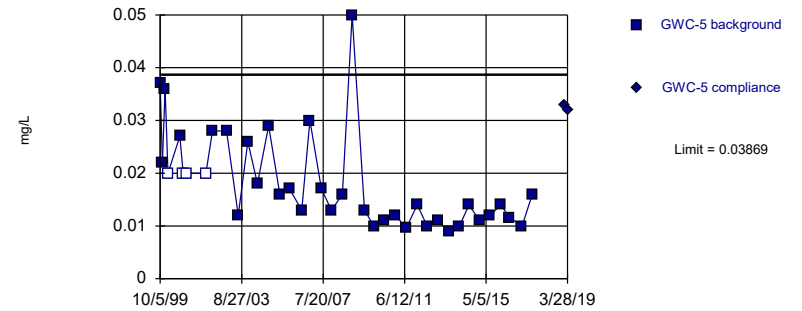


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 37 background values. 45.95% NDs. Well-constituent pair annual alpha = 0.002721. Individual comparison alpha = 0.001361 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
 Intrawell Parametric

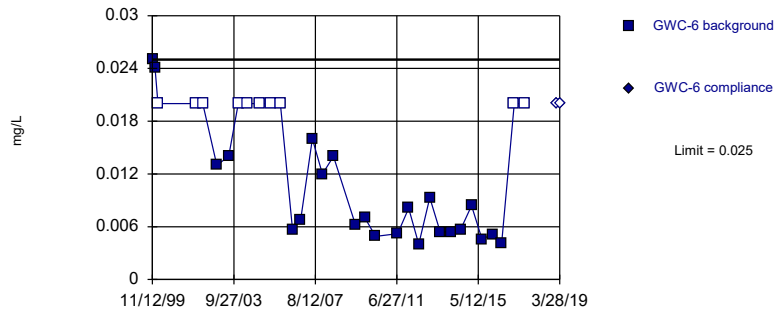


Background Data Summary (based on natural log transformation): Mean=4.103, Std. Dev.=0.4379, n=39, 10.26% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9344, critical = 0.917. Kappa = 1.942 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

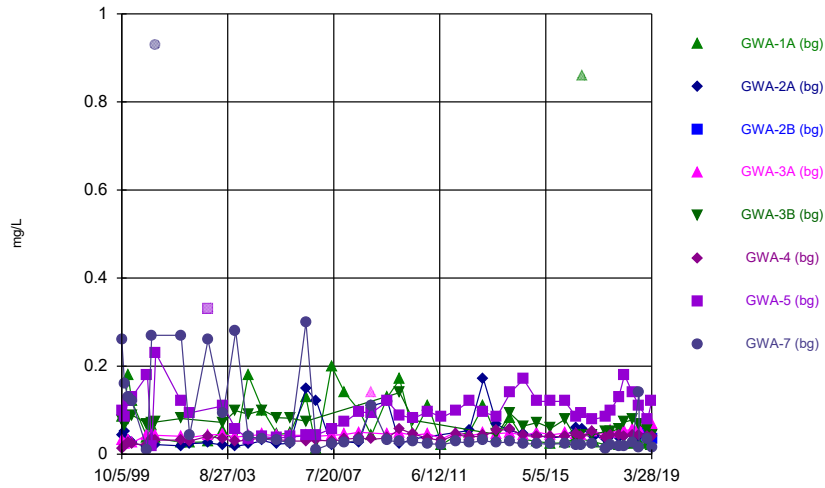
Prediction Limit
 Intrawell Non-parametric



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 33 background values. 30.3% NDs. Well-constituent pair annual alpha = 0.003399. Individual comparison alpha = 0.001701 (1 of 2).

Constituent: Zinc Analysis Run 8/9/2019 12:28 PM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

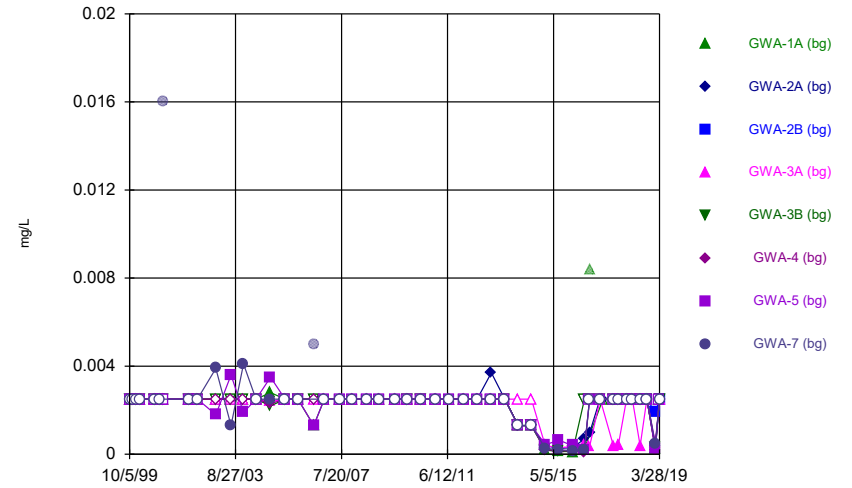
Time Series



Constituent: Barium Analysis Run 8/8/2019 10:13 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

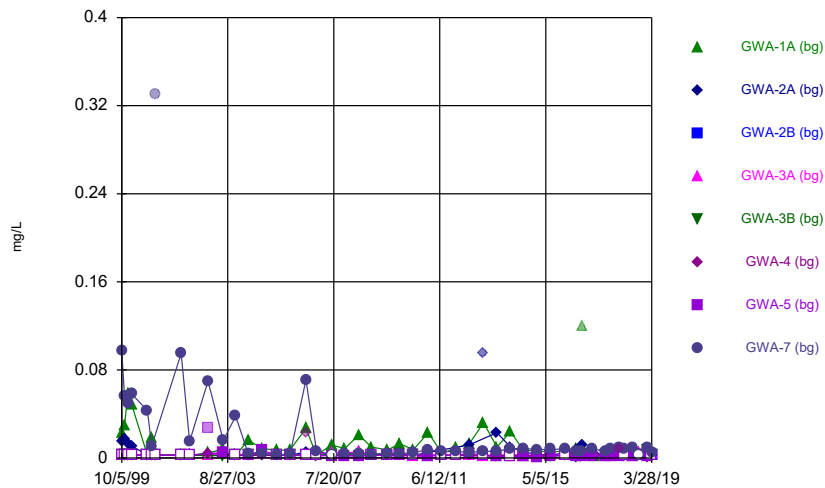
Time Series



Constituent: Beryllium Analysis Run 8/8/2019 10:13 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

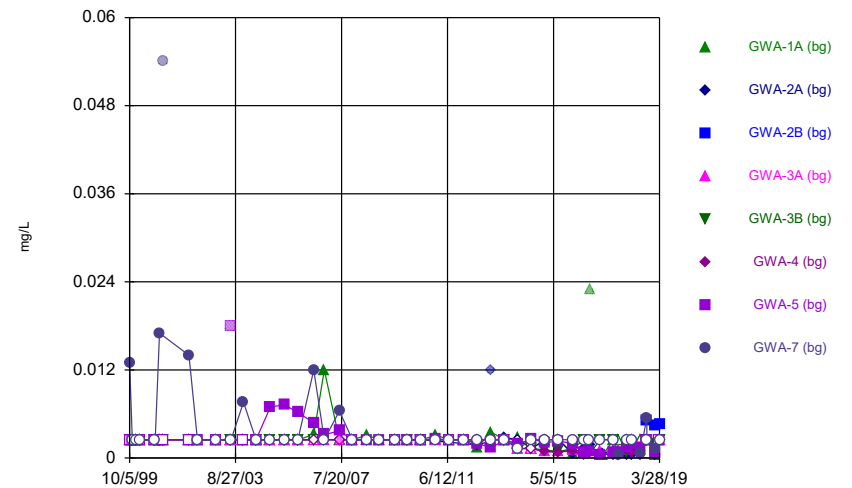
Time Series



Constituent: Chromium Analysis Run 8/8/2019 10:13 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

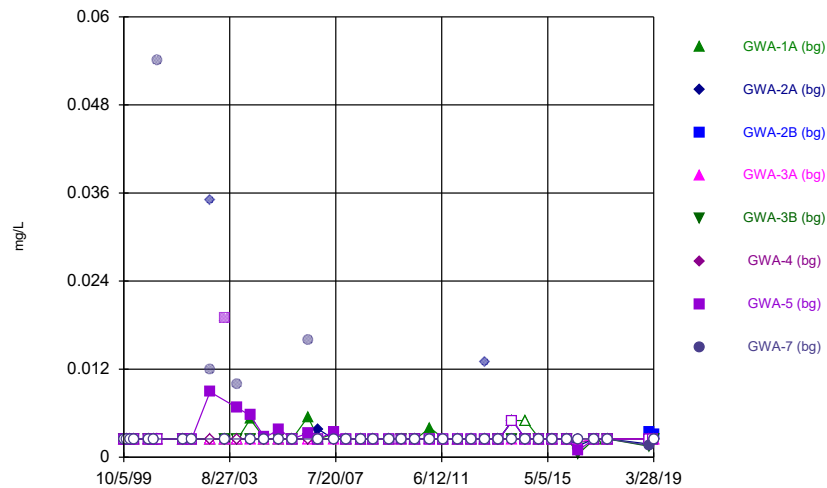
Hollow symbols indicate censored values.

Time Series



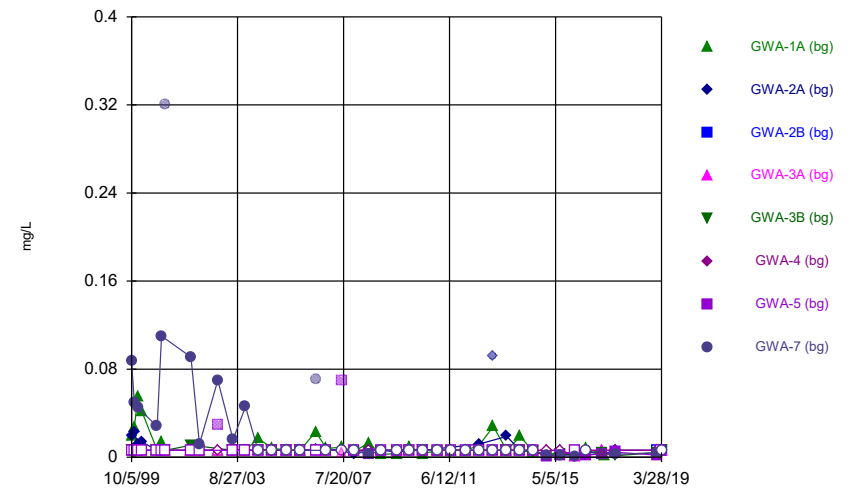
Constituent: Cobalt Analysis Run 8/8/2019 10:13 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



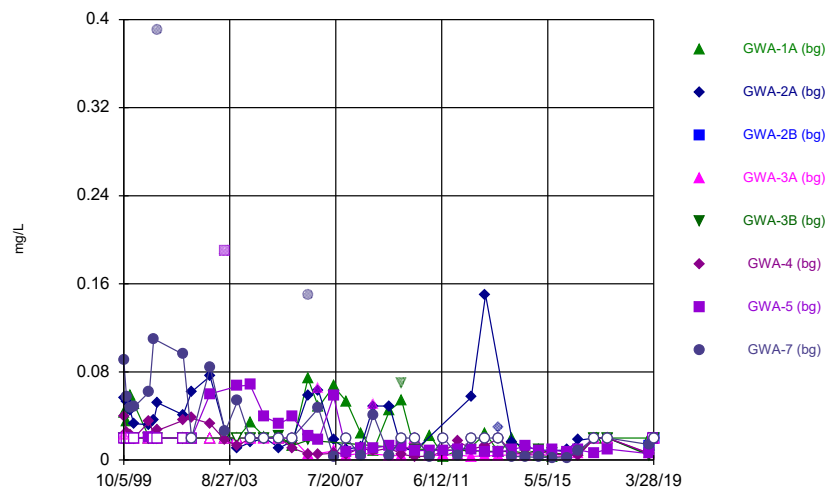
Constituent: Copper Analysis Run 8/8/2019 10:13 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



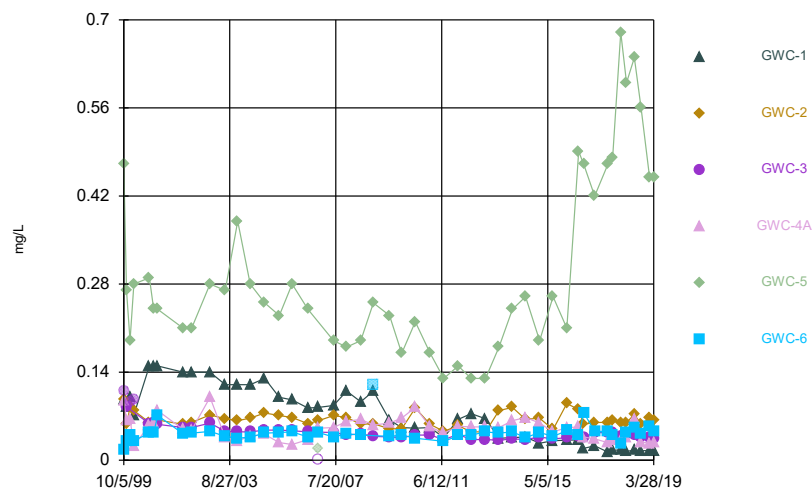
Constituent: Vanadium Analysis Run 8/8/2019 10:13 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



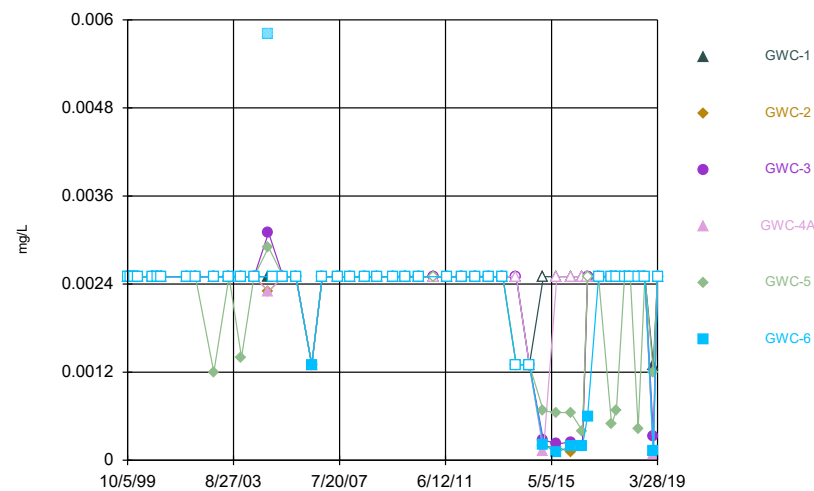
Constituent: Zinc Analysis Run 8/8/2019 10:13 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



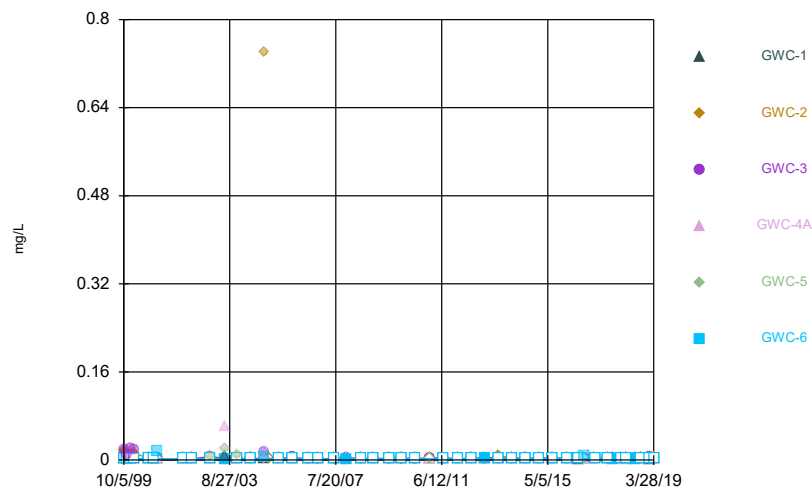
Constituent: Barium Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



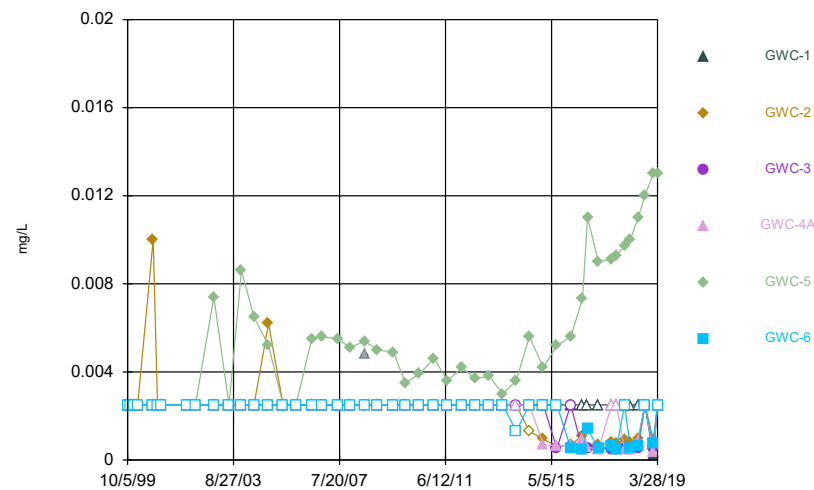
Constituent: Beryllium Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



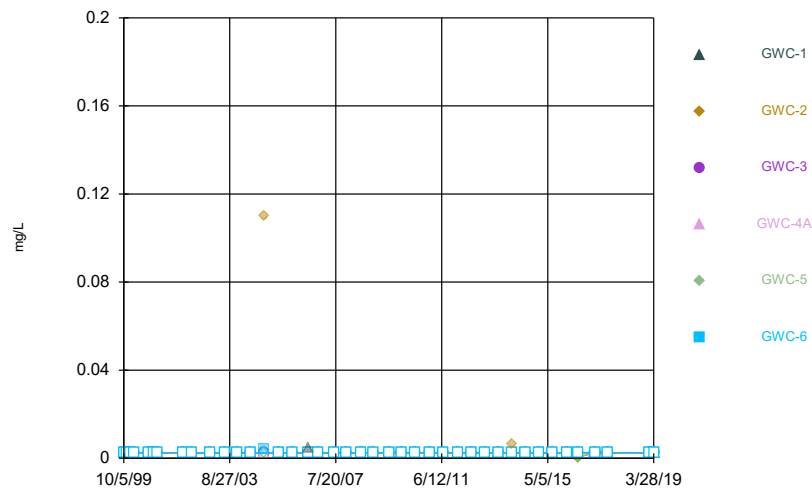
Constituent: Chromium Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



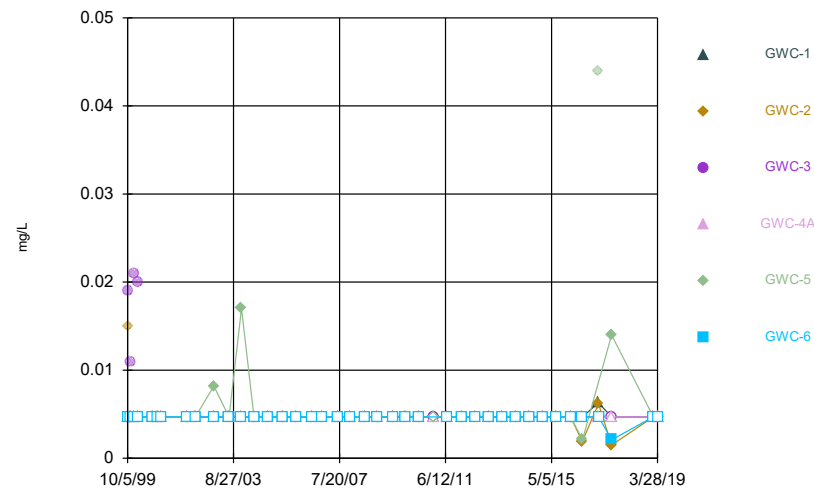
Constituent: Cobalt Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



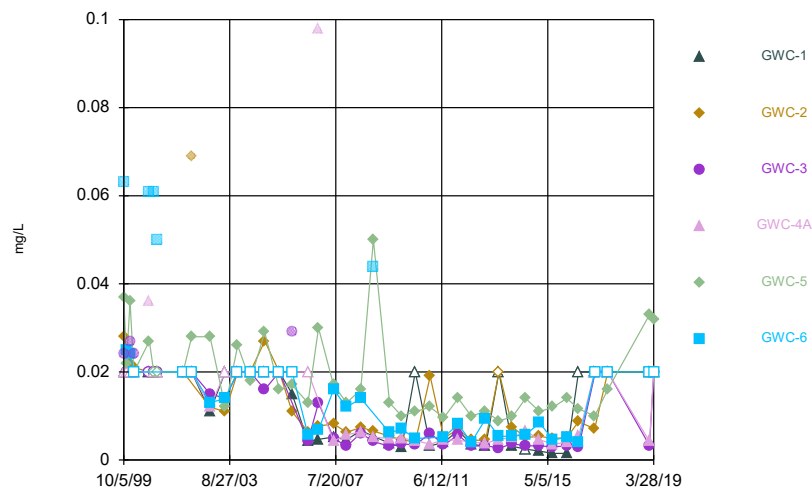
Constituent: Copper Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Vanadium Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Zinc Analysis Run 8/8/2019 10:15 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot - Upgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 8/8/2019, 3:06 PM

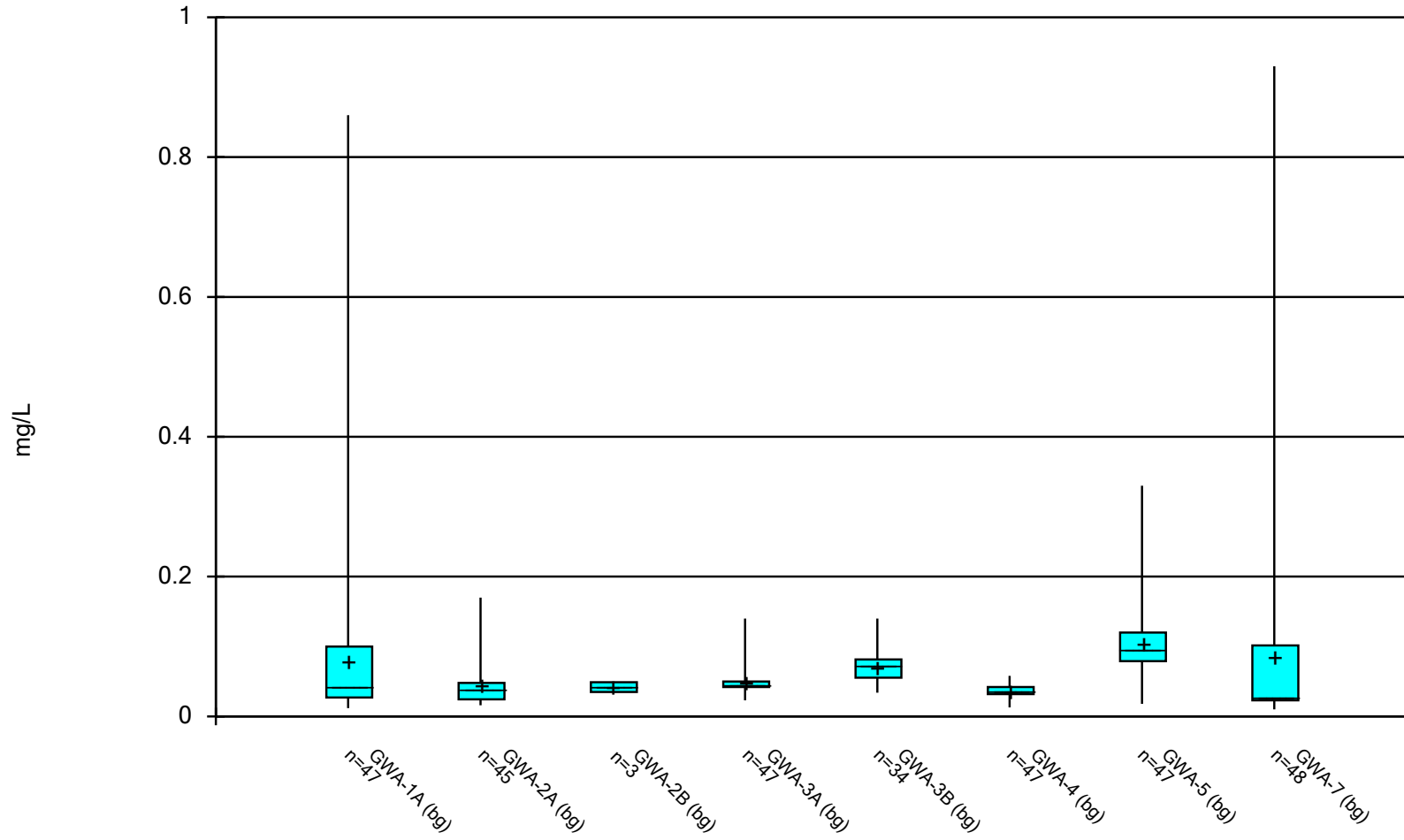
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Barium (mg/L)	GWA-1A (bg)	47	0.08114	0.1266	0.01846	0.043	0.012	0.86	0
Barium (mg/L)	GWA-2A (bg)	45	0.04628	0.0344	0.005128	0.039	0.016	0.17	0
Barium (mg/L)	GWA-2B (bg)	3	0.04167	0.007024	0.004055	0.041	0.035	0.049	0
Barium (mg/L)	GWA-3A (bg)	47	0.04739	0.01626	0.002371	0.045	0.023	0.14	0
Barium (mg/L)	GWA-3B (bg)	34	0.0715	0.02061	0.003535	0.0725	0.034	0.14	0
Barium (mg/L)	GWA-4 (bg)	47	0.03703	0.009041	0.001319	0.037	0.013	0.058	0
Barium (mg/L)	GWA-5 (bg)	47	0.1037	0.05337	0.007784	0.096	0.018	0.33	0
Barium (mg/L)	GWA-7 (bg)	48	0.08733	0.1508	0.02177	0.028	0.01	0.93	0
Beryllium (mg/L)	GWA-1A (bg)	47	0.00231	0.00118	0.0001721	0.0025	0.00011	0.0084	82.98
Beryllium (mg/L)	GWA-2A (bg)	45	0.002204	0.0007516	0.000112	0.0025	0.00027	0.0037	82.22
Beryllium (mg/L)	GWA-2B (bg)	3	0.0023	0.0003464	0.0002	0.0025	0.0019	0.0025	66.67
Beryllium (mg/L)	GWA-3A (bg)	47	0.002093	0.0008413	0.0001227	0.0025	0.00031	0.0025	78.72
Beryllium (mg/L)	GWA-3B (bg)	36	0.002168	0.0007645	0.0001274	0.0025	0.00012	0.0025	86.11
Beryllium (mg/L)	GWA-4 (bg)	47	0.002196	0.0007512	0.0001096	0.0025	0.0001	0.0025	87.23
Beryllium (mg/L)	GWA-5 (bg)	47	0.002215	0.000754	0.00011	0.0025	0.0002	0.0036	78.72
Beryllium (mg/L)	GWA-7 (bg)	48	0.002588	0.002174	0.0003137	0.0025	0.00016	0.016	77.08
Chromium (mg/L)	GWA-1A (bg)	47	0.01394	0.01979	0.002887	0.0075	0.0012	0.12	12.77
Chromium (mg/L)	GWA-2A (bg)	45	0.006967	0.01424	0.002123	0.0025	0.0016	0.095	55.56
Chromium (mg/L)	GWA-2B (bg)	3	0.002667	0.0002887	0.0001667	0.0025	0.0025	0.003	66.67
Chromium (mg/L)	GWA-3A (bg)	47	0.002963	0.001061	0.0001548	0.0025	0.0013	0.0059	36.17
Chromium (mg/L)	GWA-3B (bg)	34	0.002588	0.0008831	0.0001514	0.0025	0.0012	0.007	76.47
Chromium (mg/L)	GWA-4 (bg)	47	0.003027	0.00315	0.0004595	0.0025	0.0005	0.023	78.72
Chromium (mg/L)	GWA-5 (bg)	47	0.002957	0.003704	0.0005403	0.0025	0.0011	0.027	53.19
Chromium (mg/L)	GWA-7 (bg)	48	0.02411	0.05129	0.007404	0.0077	0.0025	0.33	4.167
Cobalt (mg/L)	GWA-1A (bg)	47	0.002994	0.003358	0.0004898	0.0025	0.00038	0.023	74.47
Cobalt (mg/L)	GWA-2A (bg)	45	0.002228	0.001702	0.0002538	0.0025	0.0004	0.012	68.89
Cobalt (mg/L)	GWA-2B (bg)	3	0.0047	0.0003606	0.0002082	0.0046	0.0044	0.0051	0
Cobalt (mg/L)	GWA-3A (bg)	47	0.002076	0.0006654	0.0000...	0.0025	0.00086	0.0025	72.34
Cobalt (mg/L)	GWA-3B (bg)	34	0.002027	0.0007317	0.0001255	0.0025	0.00041	0.0025	73.53
Cobalt (mg/L)	GWA-4 (bg)	47	0.002008	0.0007776	0.0001134	0.0025	0.00041	0.0025	74.47
Cobalt (mg/L)	GWA-5 (bg)	47	0.002843	0.002645	0.0003859	0.0025	0.00046	0.018	42.55
Cobalt (mg/L)	GWA-7 (bg)	48	0.004647	0.008036	0.00116	0.0025	0.00041	0.054	77.08
Copper (mg/L)	GWA-1A (bg)	41	0.002802	0.0008371	0.0001307	0.0025	0.002	0.0055	85.37
Copper (mg/L)	GWA-2A (bg)	38	0.003689	0.005507	0.0008933	0.0025	0.0016	0.035	86.84
Copper (mg/L)	GWA-2B (bg)	2	0.0033	0.0002828	0.0002	0.0033	0.0031	0.0035	0
Copper (mg/L)	GWA-3A (bg)	41	0.002489	0.0000...	0.0000...	0.0025	0.00205	0.0025	97.56
Copper (mg/L)	GWA-3B (bg)	28	0.002393	0.0004163	0.0000...	0.0025	0.0005	0.0025	92.86
Copper (mg/L)	GWA-4 (bg)	41	0.0025	0	0	0.0025	0.0025	0.0025	100
Copper (mg/L)	GWA-5 (bg)	41	0.003344	0.002845	0.0004443	0.0025	0.001	0.019	75.61
Copper (mg/L)	GWA-7 (bg)	41	0.004478	0.008398	0.001312	0.0025	0.0016	0.054	87.8
Vanadium (mg/L)	GWA-1A (bg)	41	0.01081	0.01085	0.001694	0.0063	0.0012	0.055	43.9
Vanadium (mg/L)	GWA-2A (bg)	37	0.009695	0.01465	0.002409	0.0063	0.0017	0.092	54.05
Vanadium (mg/L)	GWA-2B (bg)	2	0.0063	0	0	0.0063	0.0063	0.0063	100
Vanadium (mg/L)	GWA-3A (bg)	41	0.006112	0.0008922	0.0001393	0.0063	0.0011	0.0063	95.12
Vanadium (mg/L)	GWA-3B (bg)	28	0.005475	0.00203	0.0003835	0.0063	0.0014	0.011	64.29
Vanadium (mg/L)	GWA-4 (bg)	41	0.006074	0.001029	0.0001607	0.0063	0.00082	0.0063	95.12
Vanadium (mg/L)	GWA-5 (bg)	41	0.007766	0.01078	0.001683	0.0063	0.0011	0.07	78.05
Vanadium (mg/L)	GWA-7 (bg)	40	0.02737	0.05525	0.008735	0.0063	0.001	0.32	52.5
Zinc (mg/L)	GWA-1A (bg)	41	0.02478	0.01831	0.00286	0.02	0.0026	0.074	31.71
Zinc (mg/L)	GWA-2A (bg)	38	0.03265	0.02779	0.004508	0.02	0.0051	0.15	10.53

Box & Whiskers Plot - Upgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 8/8/2019, 3:06 PM

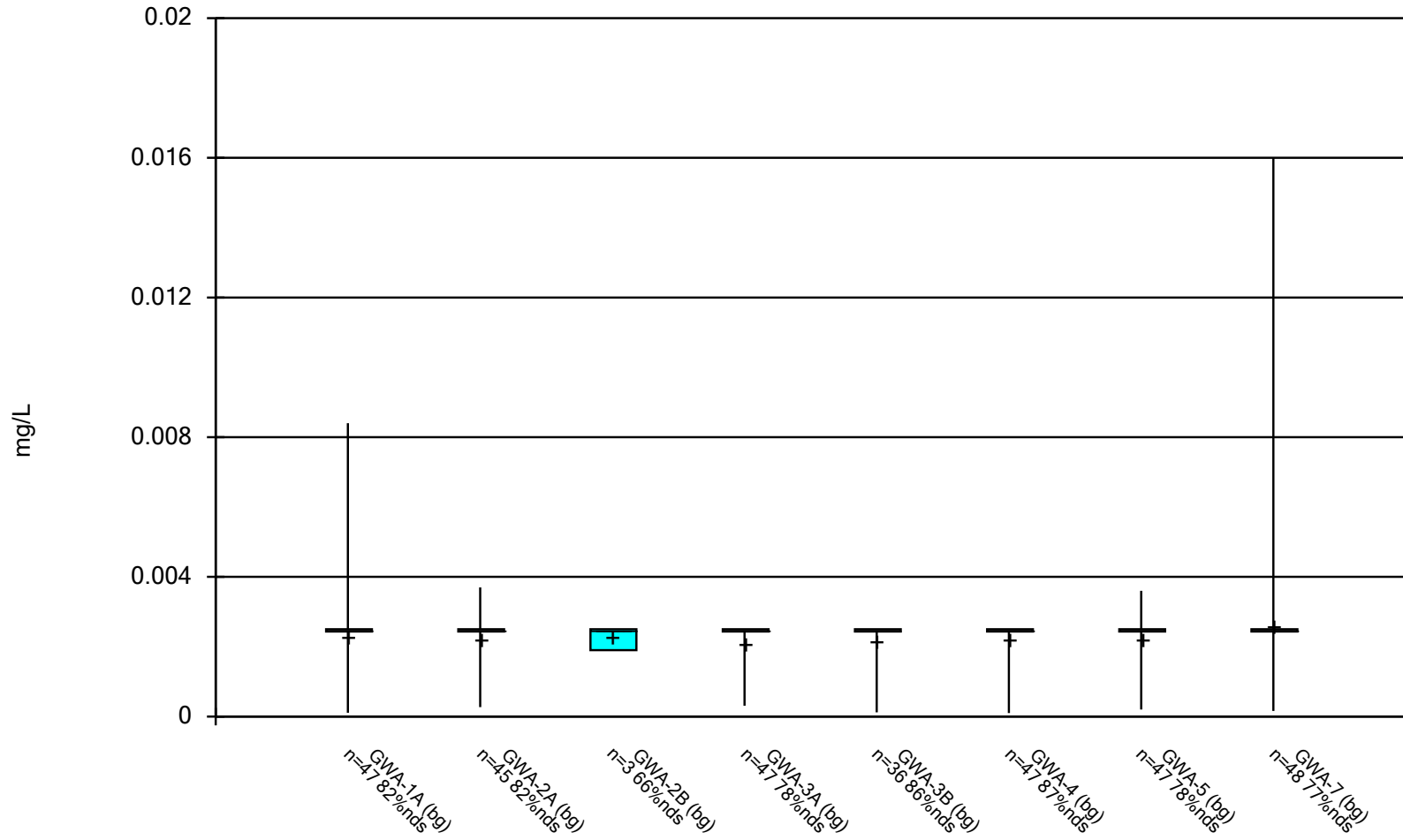
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Std. Err.</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>	<u>%NDs</u>
Zinc (mg/L)	GWA-2B (bg)	2	0.0165	0.00495	0.0035	0.0165	0.013	0.02	50
Zinc (mg/L)	GWA-3A (bg)	41	0.01482	0.01263	0.001973	0.02	0.0033	0.065	46.34
Zinc (mg/L)	GWA-3B (bg)	28	0.01731	0.01208	0.002283	0.02	0.0041	0.07	53.57
Zinc (mg/L)	GWA-4 (bg)	41	0.01543	0.01046	0.001633	0.013	0.0031	0.039	19.51
Zinc (mg/L)	GWA-5 (bg)	41	0.02407	0.03132	0.004892	0.013	0.0057	0.19	21.95
Zinc (mg/L)	GWA-7 (bg)	41	0.04036	0.06517	0.01018	0.02	0.0017	0.39	36.59

Box & Whiskers Plot



Constituent: Barium Analysis Run 8/8/2019 3:04 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

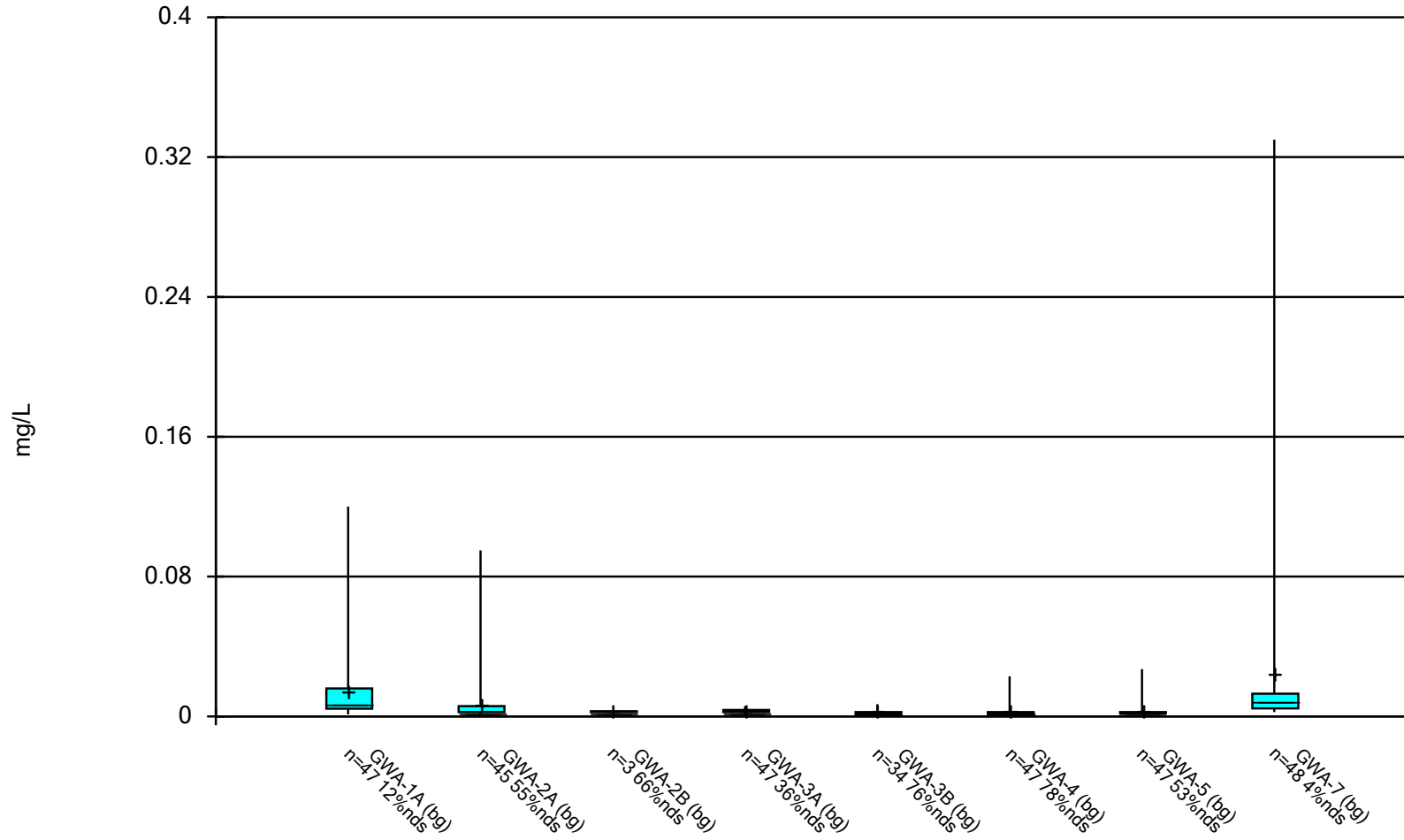
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 8/8/2019 3:04 PM

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

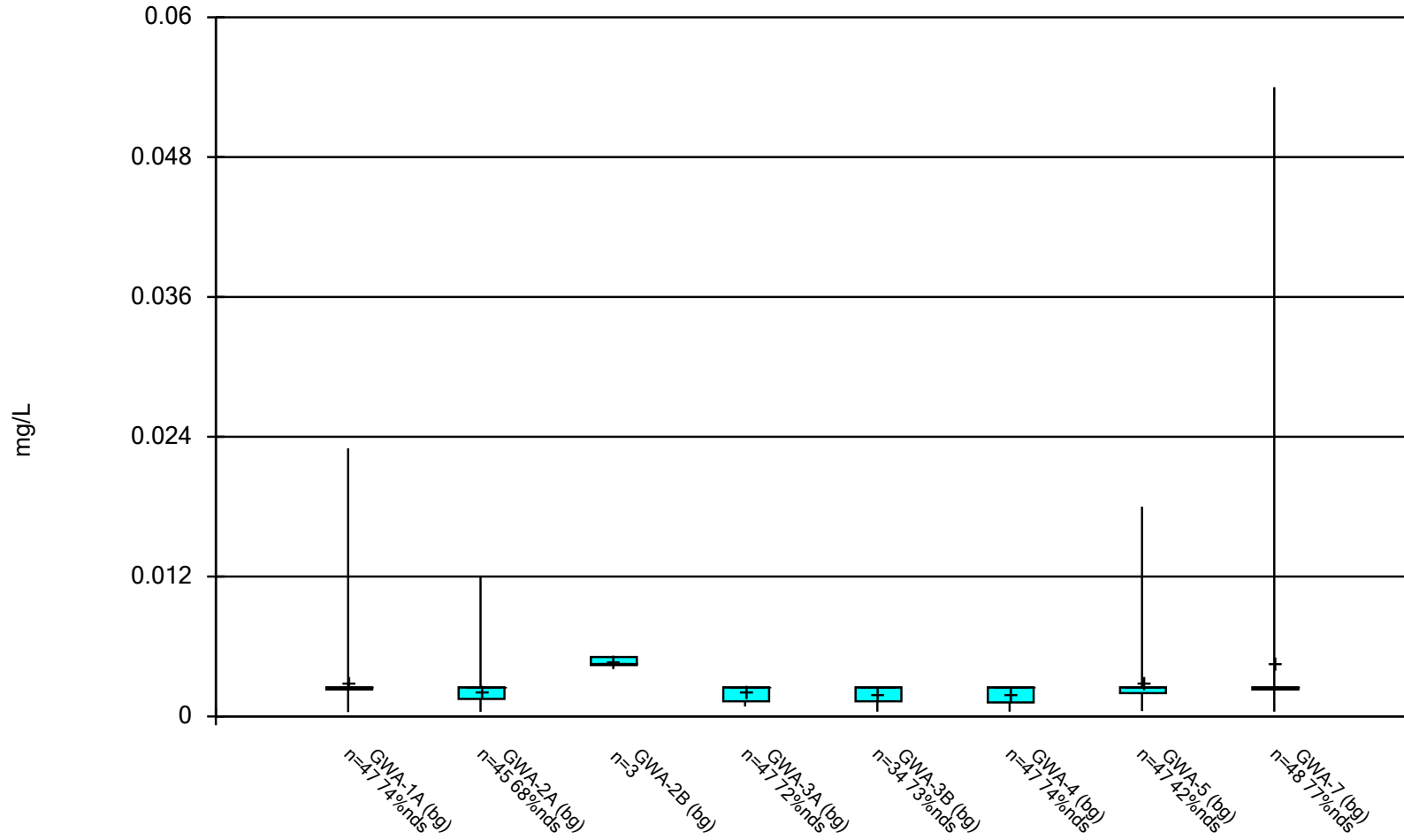
Box & Whiskers Plot



Constituent: Chromium Analysis Run 8/8/2019 3:04 PM

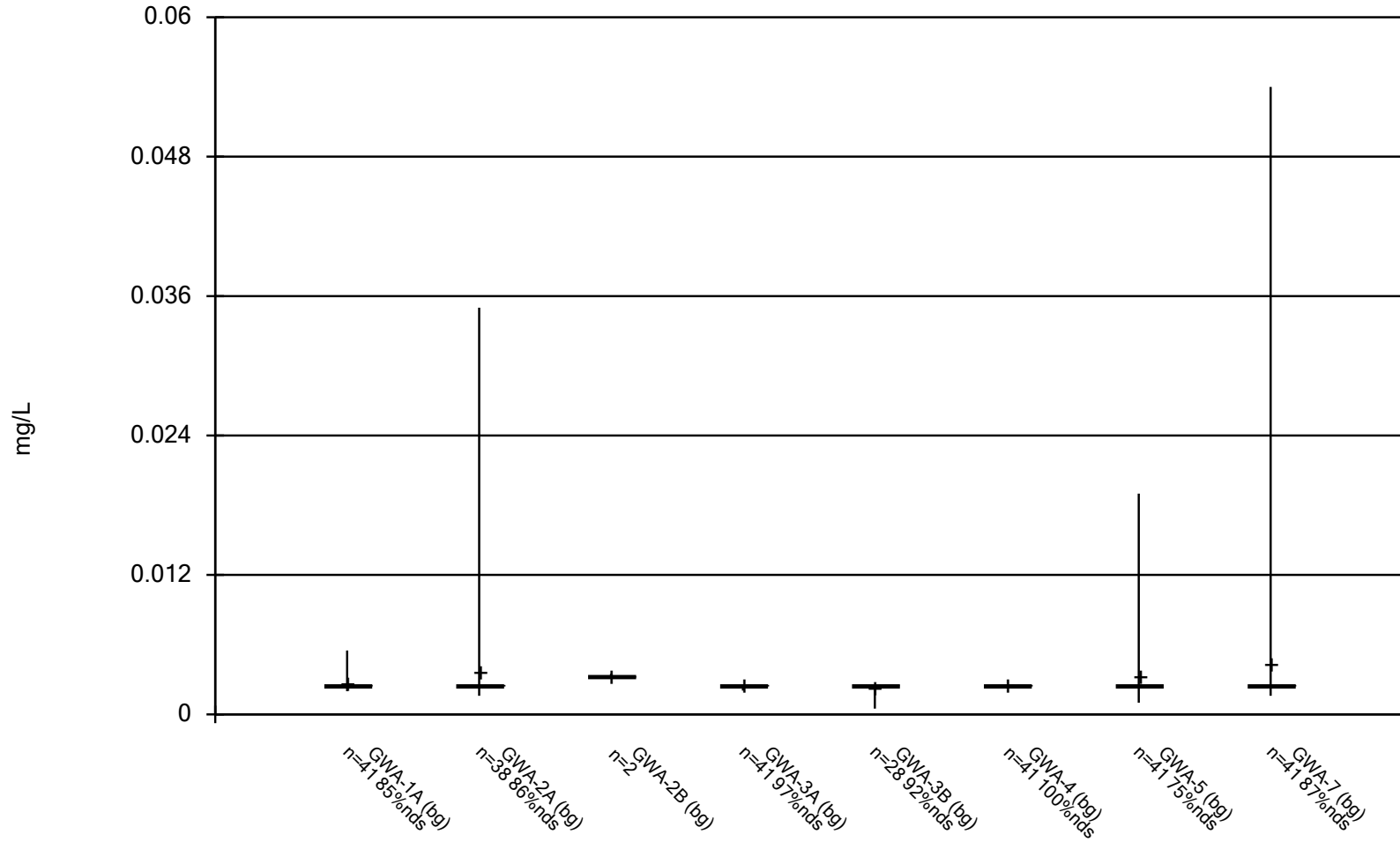
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



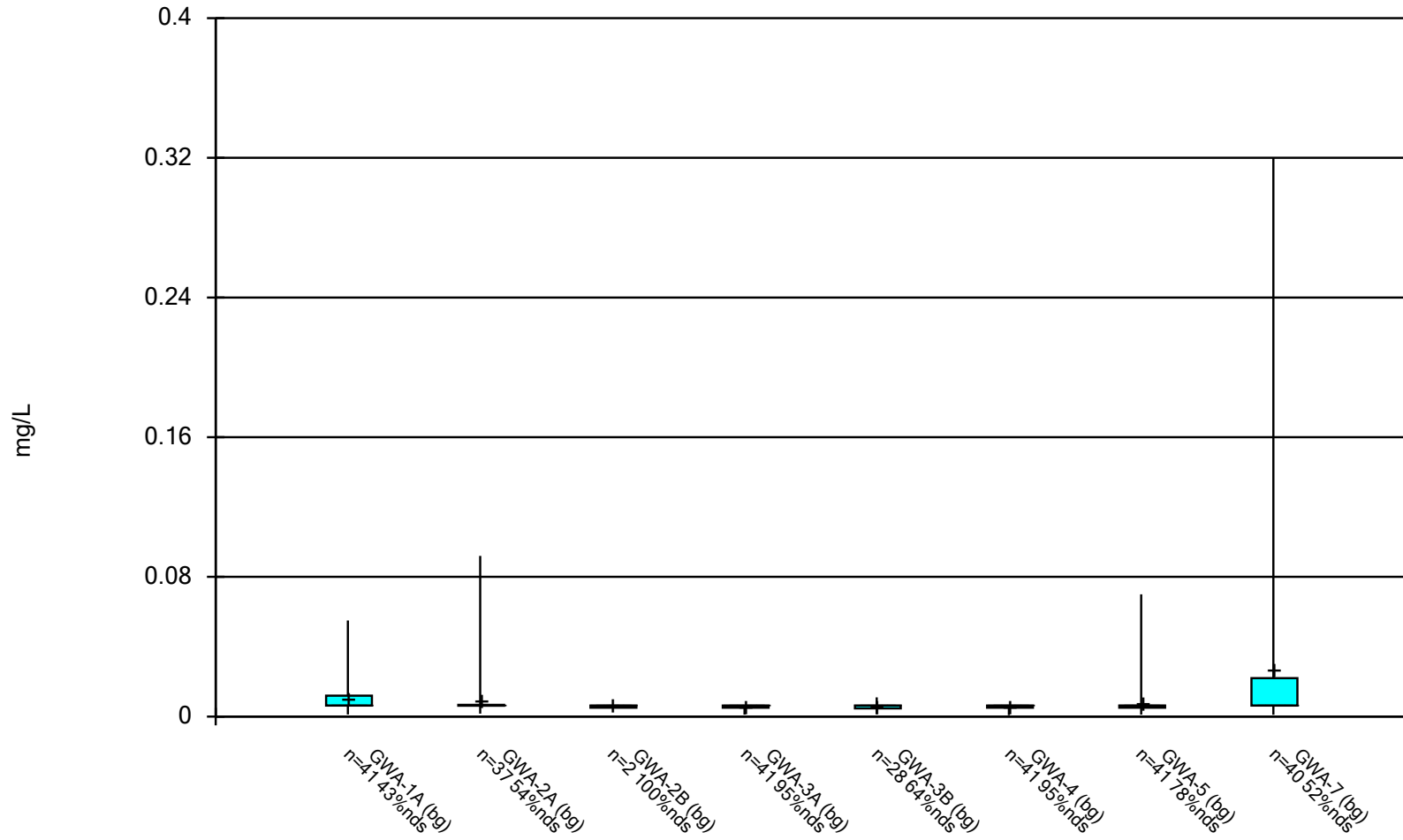
Constituent: Cobalt Analysis Run 8/8/2019 3:04 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Copper Analysis Run 8/8/2019 3:04 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

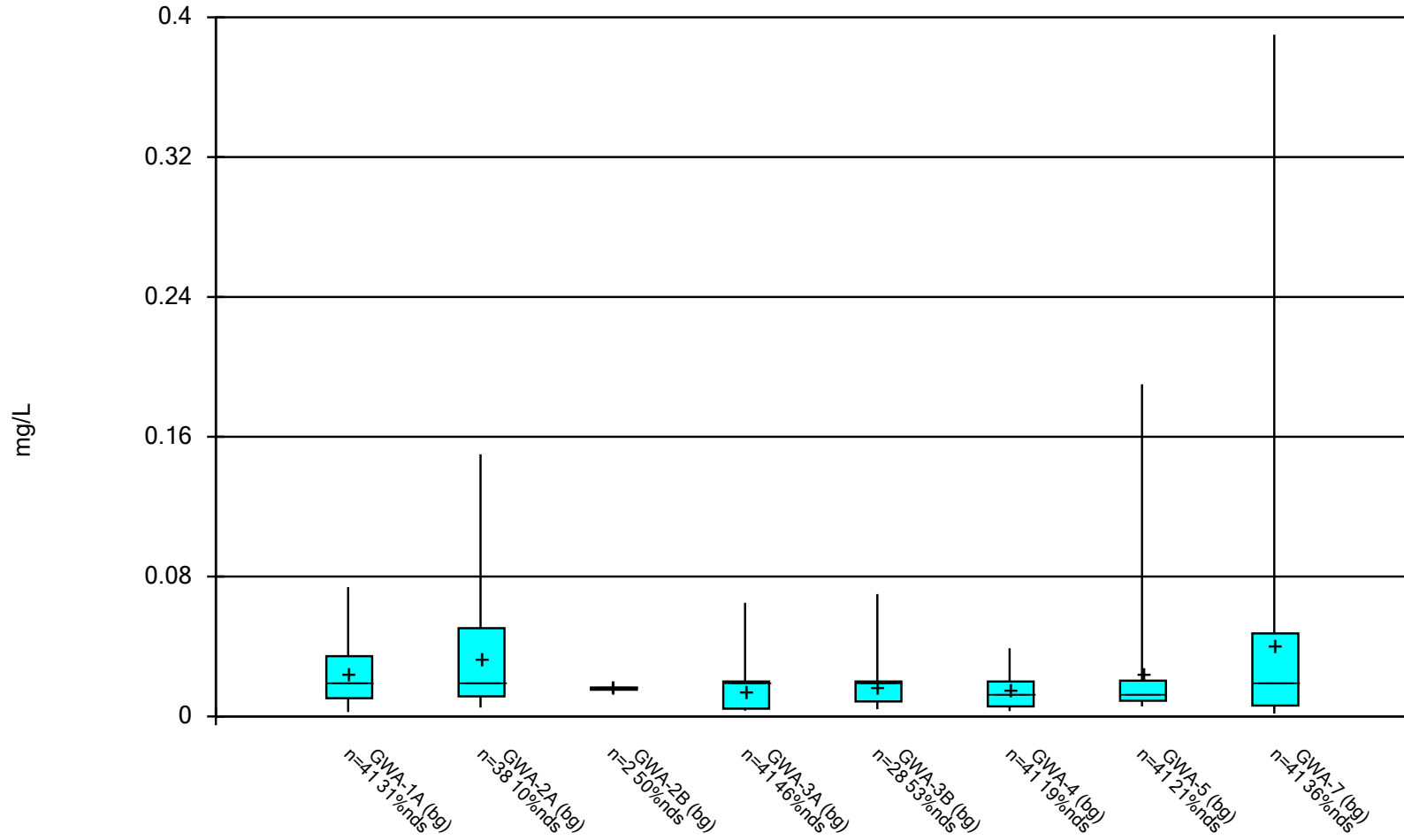
Box & Whiskers Plot



Constituent: Vanadium Analysis Run 8/8/2019 3:04 PM

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



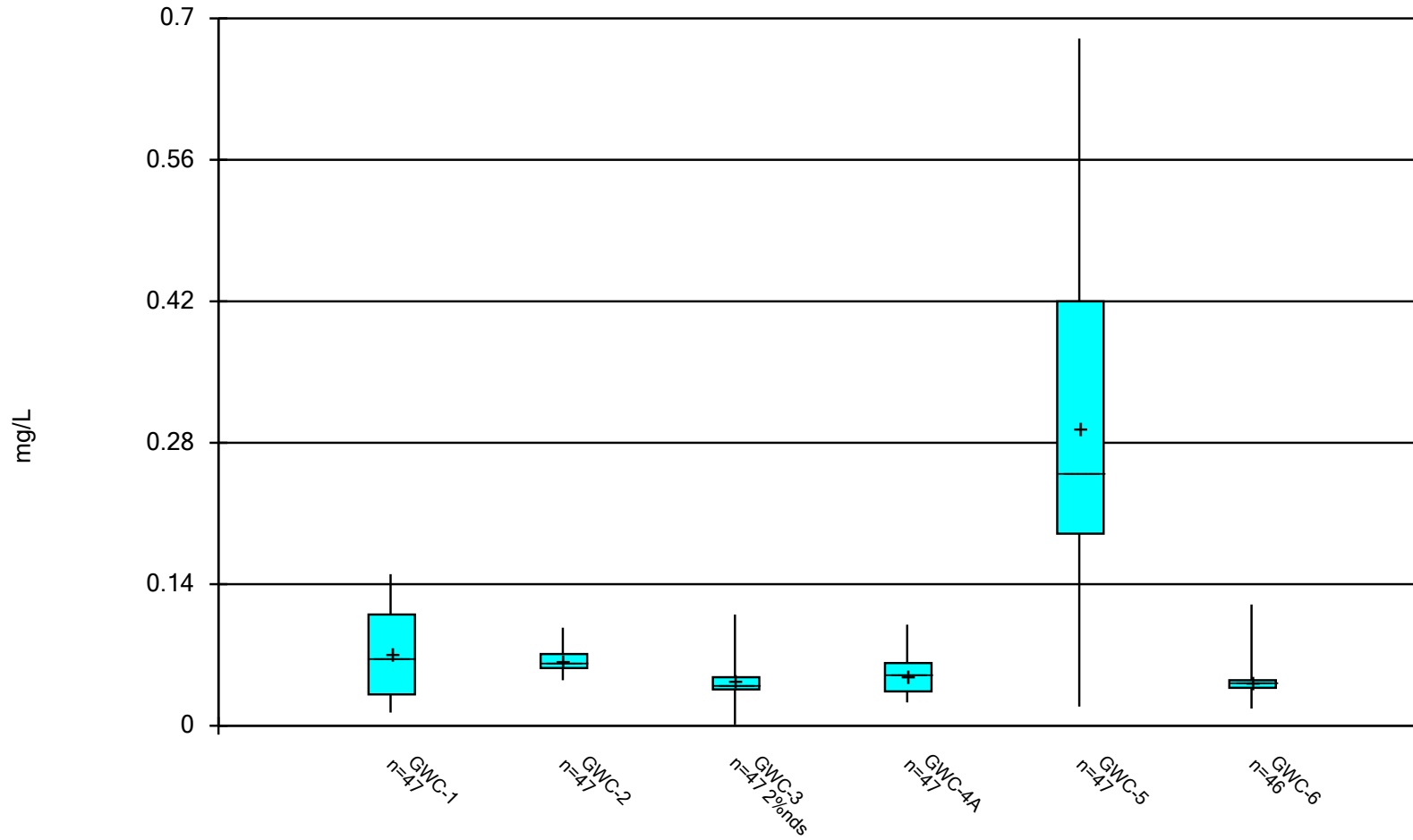
Constituent: Zinc Analysis Run 8/8/2019 3:04 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot - Downgradient Wells

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 8/8/2019, 3:09 PM

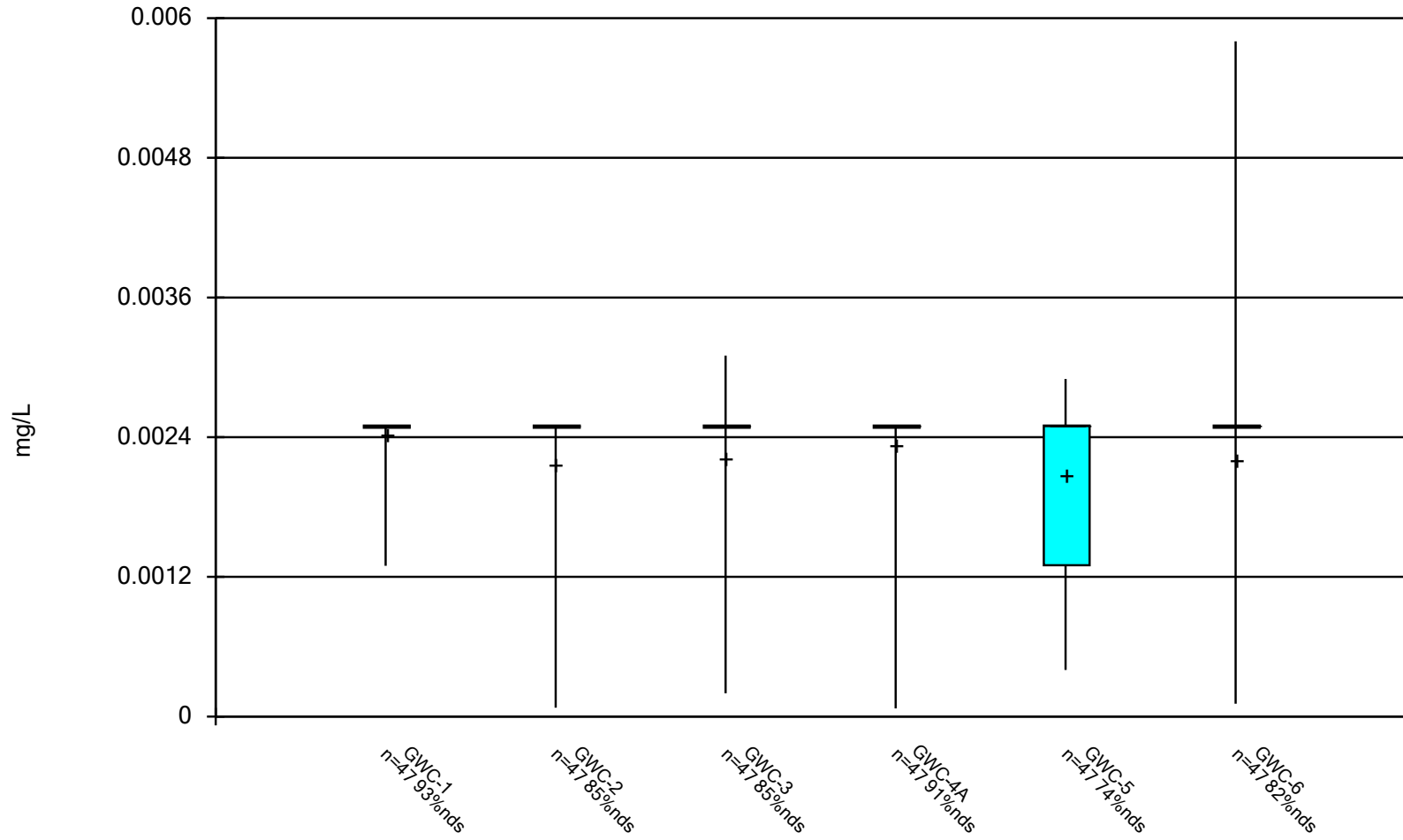
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Std. Err.</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>	<u>%NDs</u>
Barium (mg/L)	GWC-1	47	0.0708	0.04515	0.006586	0.066	0.013	0.15	0
Barium (mg/L)	GWC-2	47	0.06474	0.01168	0.001704	0.063	0.045	0.097	0
Barium (mg/L)	GWC-3	47	0.04556	0.01826	0.002664	0.04	0.0013	0.11	2.128
Barium (mg/L)	GWC-4A	47	0.05029	0.01796	0.002619	0.052	0.023	0.1	0
Barium (mg/L)	GWC-5	47	0.294	0.1477	0.02154	0.25	0.019	0.68	0
Barium (mg/L)	GWC-6	46	0.04338	0.01475	0.002175	0.042	0.017	0.12	0
Beryllium (mg/L)	GWC-1	47	0.002423	0.0002969	0.0000...	0.0025	0.001295	0.0025	93.62
Beryllium (mg/L)	GWC-2	47	0.002169	0.0007635	0.0001114	0.0025	0.000076	0.0025	85.11
Beryllium (mg/L)	GWC-3	47	0.002223	0.0007346	0.0001071	0.0025	0.0002	0.0031	85.11
Beryllium (mg/L)	GWC-4A	47	0.002342	0.0005381	0.0000...	0.0025	0.00007	0.0025	91.49
Beryllium (mg/L)	GWC-5	47	0.002065	0.000758	0.0001106	0.0025	0.0004	0.0029	74.47
Beryllium (mg/L)	GWC-6	47	0.002205	0.0009552	0.0001393	0.0025	0.00011	0.0058	82.98
Chromium (mg/L)	GWC-1	47	0.002543	0.0007175	0.0001047	0.0025	0.0008	0.007	93.62
Chromium (mg/L)	GWC-2	48	0.01893	0.1063	0.01535	0.0027	0.0014	0.74	22.92
Chromium (mg/L)	GWC-3	47	0.004819	0.004629	0.0006753	0.0035	0.0023	0.022	14.89
Chromium (mg/L)	GWC-4A	47	0.003813	0.008538	0.001245	0.0025	0.0019	0.061	91.49
Chromium (mg/L)	GWC-5	47	0.003138	0.00305	0.0004449	0.0025	0.0013	0.021	85.11
Chromium (mg/L)	GWC-6	46	0.002854	0.00213	0.0003141	0.0025	0.0011	0.016	82.61
Cobalt (mg/L)	GWC-1	47	0.0025	0.0004817	0.0000...	0.0025	0.00018	0.0048	95.74
Cobalt (mg/L)	GWC-2	47	0.002282	0.0015	0.0002188	0.0025	0.0006	0.01	70.21
Cobalt (mg/L)	GWC-3	47	0.002077	0.0008225	0.00012	0.0025	0.00047	0.0025	78.72
Cobalt (mg/L)	GWC-4A	47	0.002099	0.000783	0.0001142	0.0025	0.00038	0.0025	76.6
Cobalt (mg/L)	GWC-5	47	0.005609	0.003124	0.0004557	0.005	0.0025	0.013	25.53
Cobalt (mg/L)	GWC-6	47	0.002123	0.0007478	0.0001091	0.0025	0.00048	0.0025	80.85
Copper (mg/L)	GWC-1	41	0.002554	0.0003436	0.0000...	0.0025	0.0025	0.0047	97.56
Copper (mg/L)	GWC-2	41	0.005171	0.0168	0.002623	0.0025	0.0005	0.11	92.68
Copper (mg/L)	GWC-3	41	0.002502	0.0000...	0.0000...	0.0025	0.0025	0.0026	97.56
Copper (mg/L)	GWC-4A	41	0.0025	0	0	0.0025	0.0025	0.0025	100
Copper (mg/L)	GWC-5	41	0.002459	0.0002819	0.0000...	0.0025	0.0007	0.0026	95.12
Copper (mg/L)	GWC-6	41	0.002546	0.0002967	0.0000...	0.0025	0.0025	0.0044	97.56
Vanadium (mg/L)	GWC-1	41	0.004739	0.0002499	0.0000...	0.0047	0.0047	0.0063	97.56
Vanadium (mg/L)	GWC-2	41	0.004841	0.001772	0.0002767	0.0047	0.0015	0.015	90.24
Vanadium (mg/L)	GWC-3	41	0.005973	0.004116	0.0006427	0.0047	0.0047	0.021	90.24
Vanadium (mg/L)	GWC-4A	41	0.0047	0	0	0.0047	0.0047	0.0047	100
Vanadium (mg/L)	GWC-5	41	0.006207	0.006535	0.001021	0.0047	0.0021	0.044	87.8
Vanadium (mg/L)	GWC-6	40	0.004635	0.0004111	0.000065	0.0047	0.0021	0.0047	97.5
Zinc (mg/L)	GWC-1	41	0.01255	0.008043	0.001256	0.02	0.0015	0.02	53.66
Zinc (mg/L)	GWC-2	41	0.01418	0.01148	0.001793	0.011	0.0041	0.069	29.27
Zinc (mg/L)	GWC-3	41	0.01175	0.008708	0.00136	0.0061	0.0027	0.029	29.27
Zinc (mg/L)	GWC-4A	41	0.01465	0.01574	0.002458	0.012	0.0036	0.098	43.9
Zinc (mg/L)	GWC-5	41	0.01897	0.009459	0.001477	0.016	0.0089	0.05	9.756
Zinc (mg/L)	GWC-6	40	0.01832	0.01601	0.002531	0.015	0.004	0.063	30

Box & Whiskers Plot



Constituent: Barium Analysis Run 8/8/2019 3:08 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

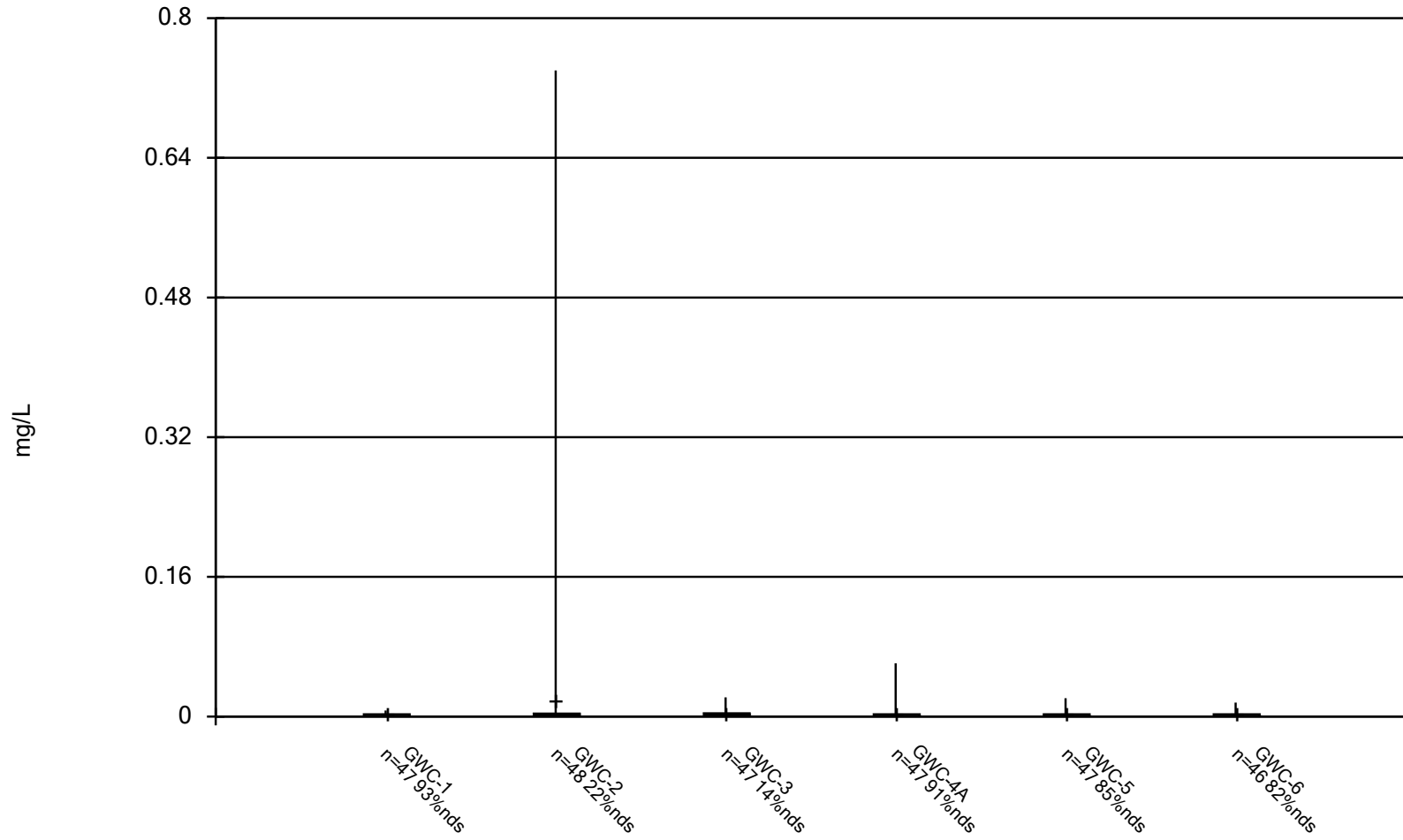
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 8/8/2019 3:08 PM

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

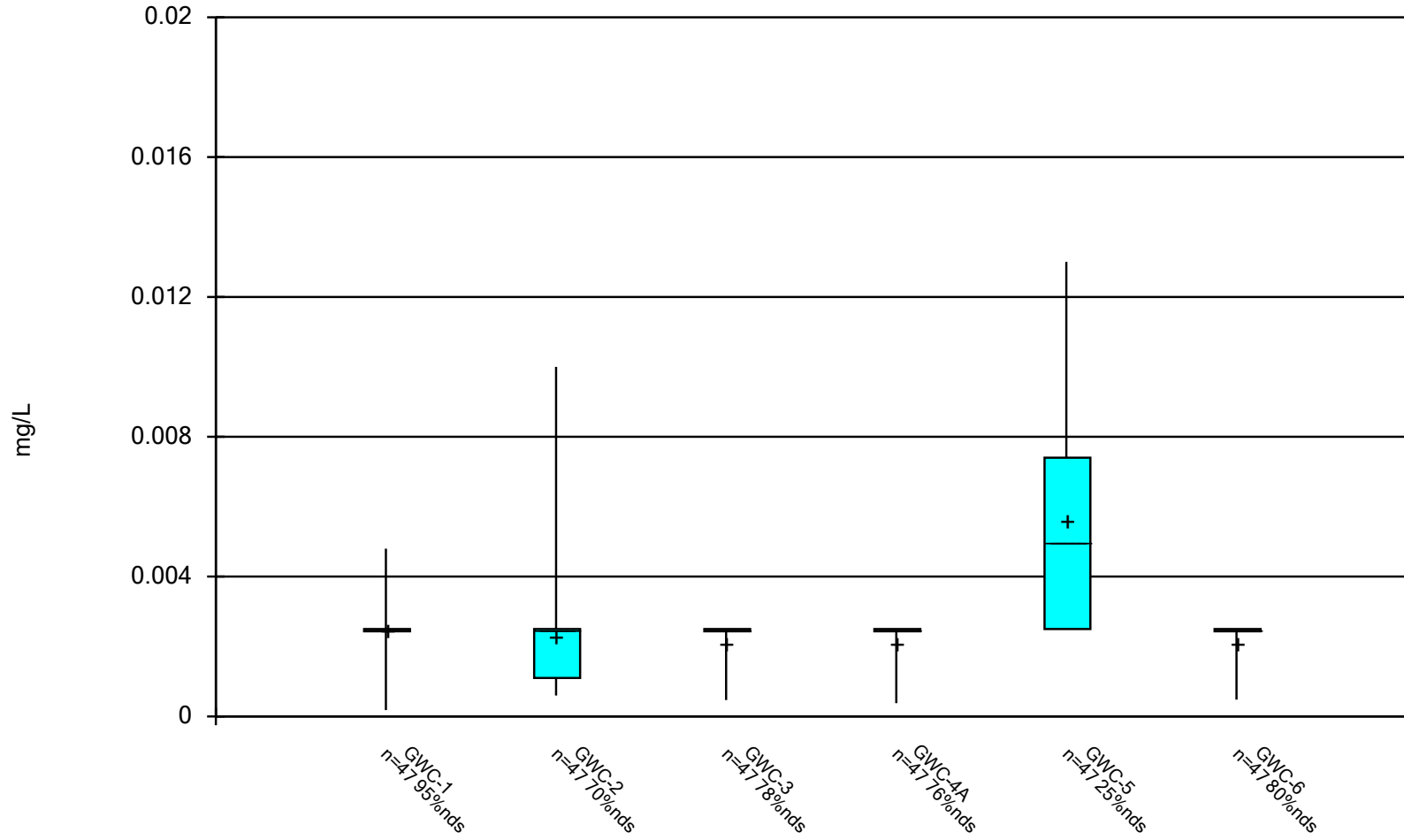
Box & Whiskers Plot



Constituent: Chromium Analysis Run 8/8/2019 3:08 PM

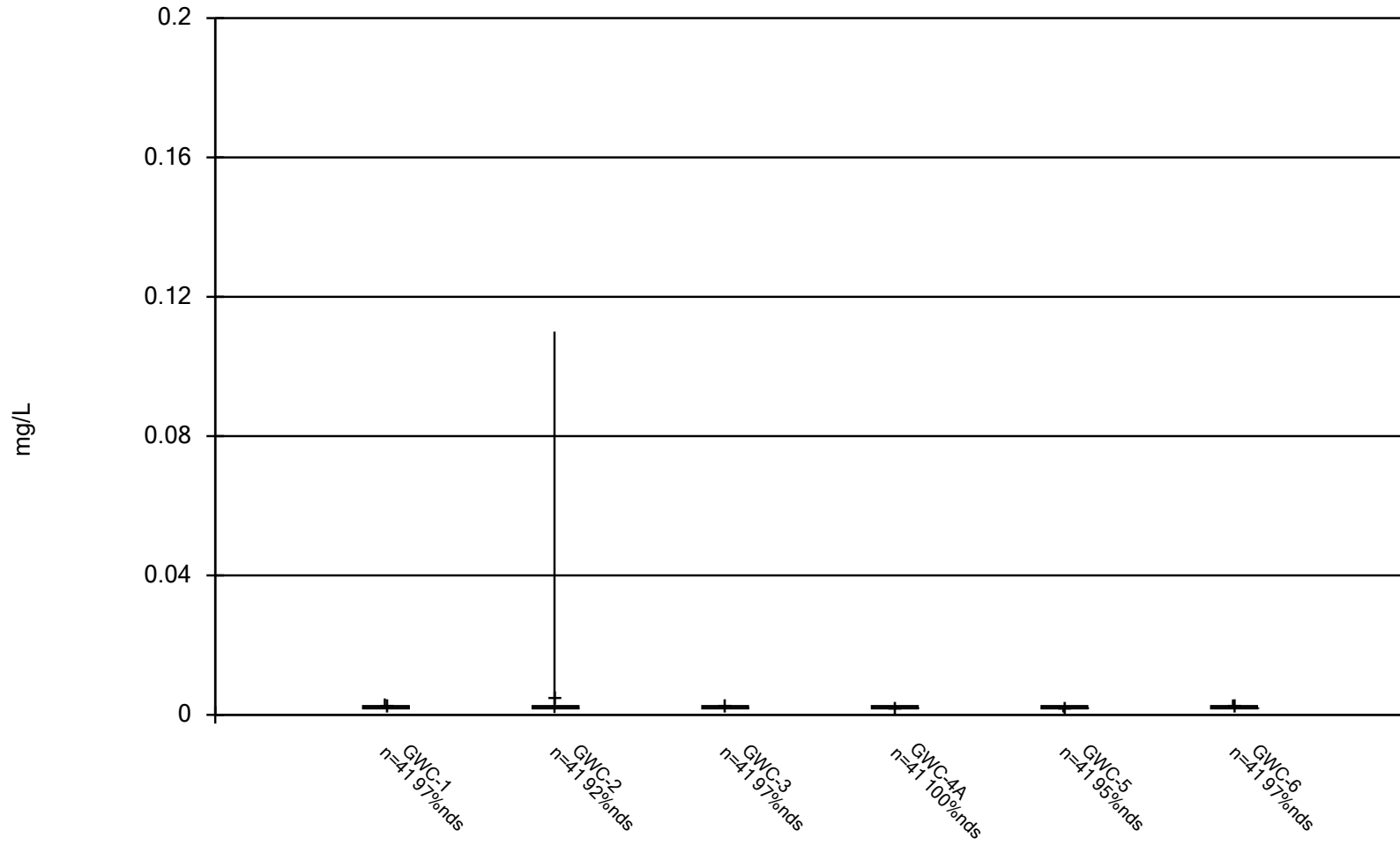
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



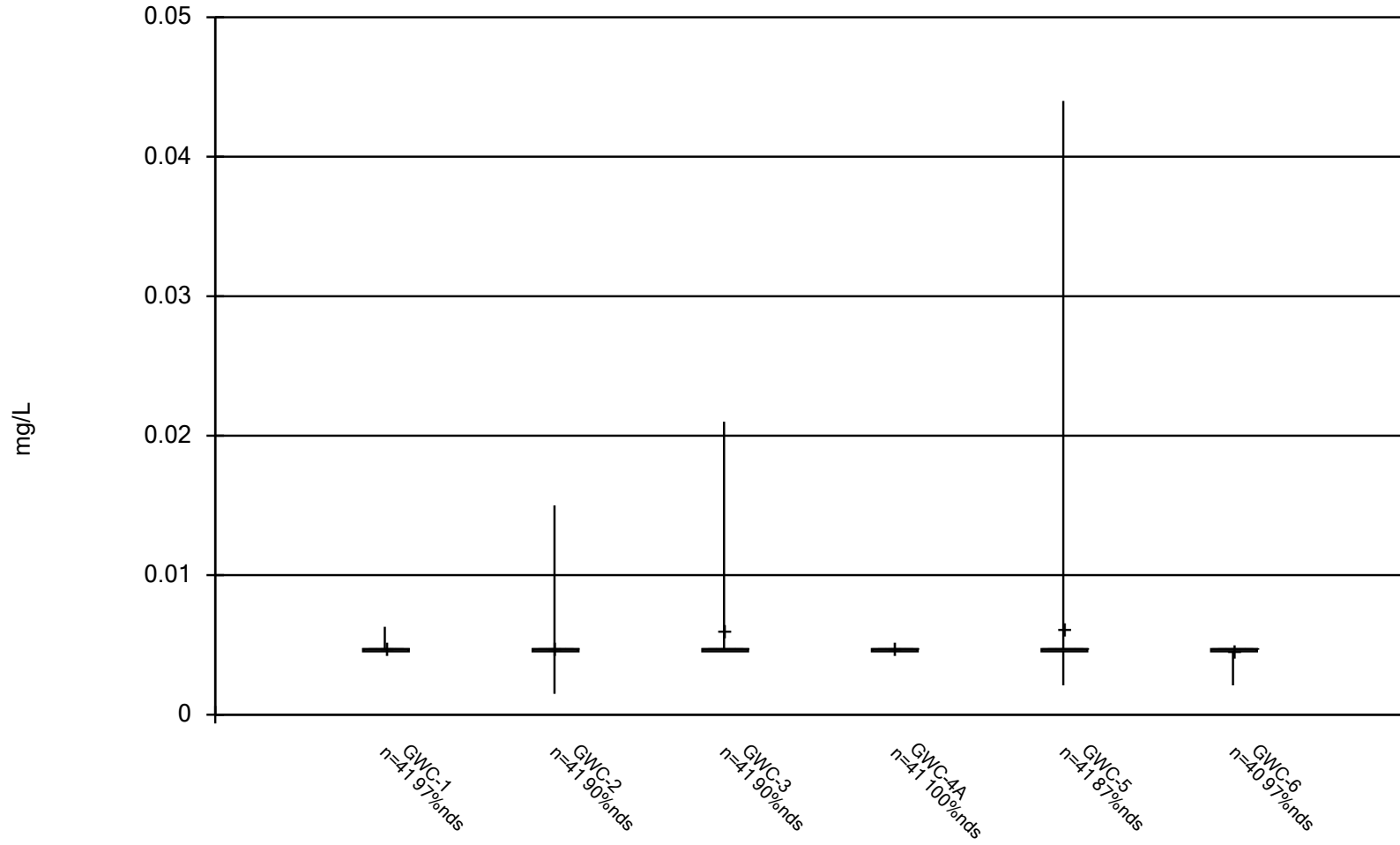
Constituent: Cobalt Analysis Run 8/8/2019 3:08 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Copper Analysis Run 8/8/2019 3:08 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

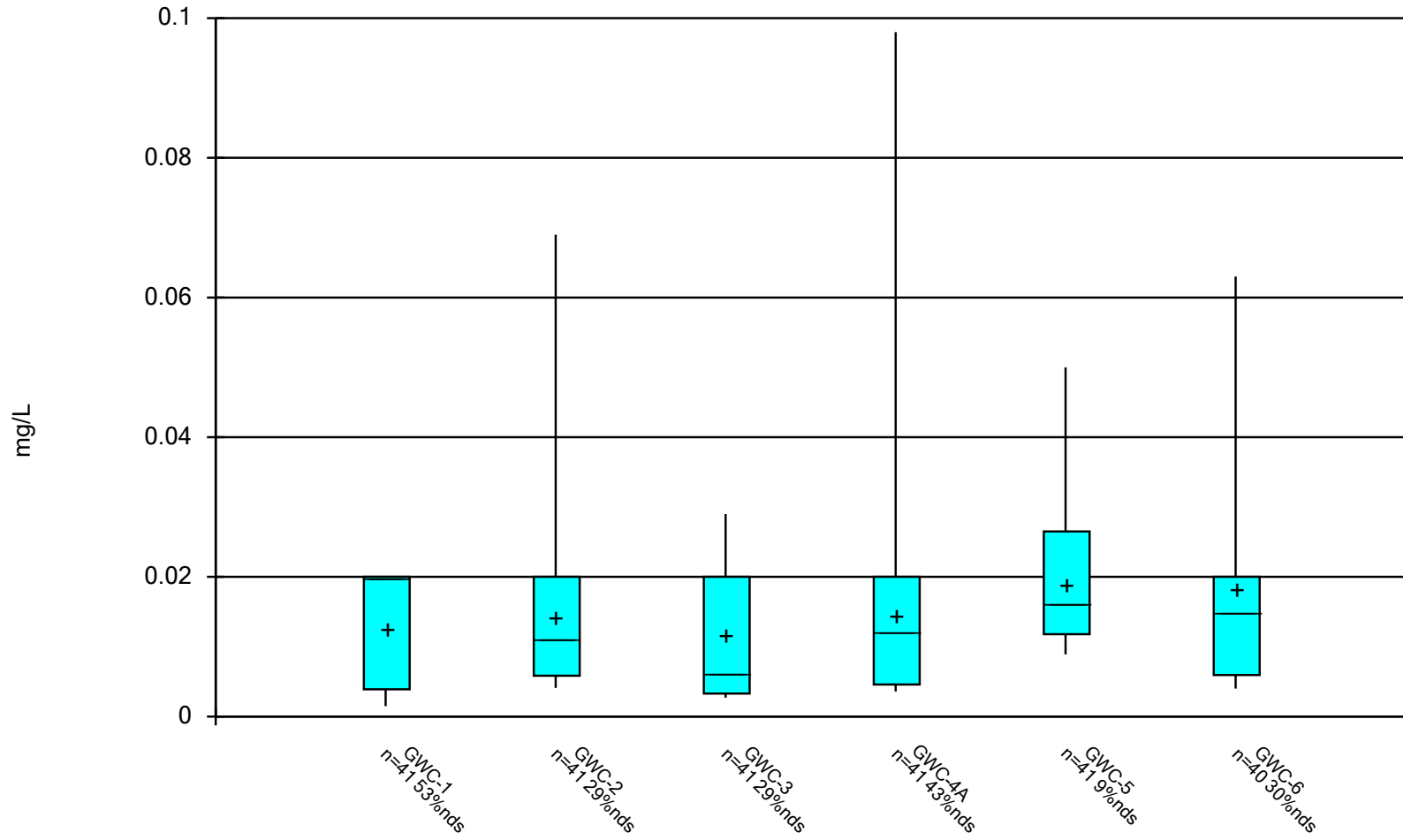
Box & Whiskers Plot



Constituent: Vanadium Analysis Run 8/8/2019 3:08 PM

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Zinc Analysis Run 8/8/2019 3:08 PM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR