2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

MISSISSIPPI POWER COMPANY
PLANT VICTOR DANIEL
ASH POND B

January 31, 2021

Prepared for

Mississippi Power Company
Gulfport, Mississippi

By

Southern Company Services
Earth Science and Environmental Engineering

Mississippi Power

CERTIFICATION STATEMENT

This 2020 Annual Groundwater Monitoring and Corrective Action Report, Mississippi Power Company – Plant Daniel Ash Pond B has been prepared to comply with the United States Environmental Protection Agency coal combustion residual rule (40 Code of Federal Regulations (CFR) Part 257, Subpart D) under the supervision of a licensed Professional Geologist with Southern Company Services.

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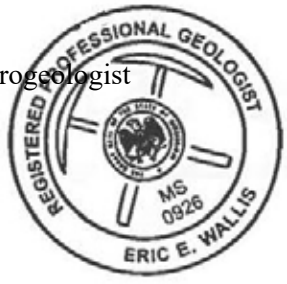

SITE SUMMARY

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D), this 2020 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2020 semi-annual assessment groundwater monitoring activities at the Plant Daniel Ash Pond B (AP-B) and to satisfy the requirements of § 257.90(e). Semi-annual assessment monitoring and associated reporting for Plant Daniel AP-B is performed in accordance with the monitoring requirements § 257.90 through § 257.95.

The CCR unit began the monitoring period in assessment monitoring pursuant to §257.95. Statistically significant increases (SSIs) of Appendix III constituents over background were identified in the results of the first detection monitoring event and assessment monitoring was initiated in January 2018. Statistically significant levels (SSLs) of Appendix IV parameters have not been identified during assessment monitoring and therefore, the AP-B will remain assessment monitoring.

Pursuant to 40 CFR 257.90(e)(6), the table titled **Monitoring Period Summary** has been prepared to describe the status of groundwater monitoring and corrective action during the monitoring period for this report.

Monitoring Period Summary
Plant Daniel - Ash Pond B

Monitoring Period:	January 1 - December 31, 2020
Beginning Status:	Assessment
Ending Status:	Assessment

Statistical Analysis Results *

Appendix III SSIs

Parameter	Wells
Boron	BAW-5
Calcium	BAW-4, BAW-5
Chloride	BAW-3, BAW-5
Fluoride	NONE
pH	BAW-5
Sulfate	NONE
TDS	BAW-5

Appendix IV SSLs

Parameter	Wells
Lithium	BAW-5

* See the attached report for further details regarding statistical exceedances and alternate source demonstrations.

Assessment of Corrective Measures & Groundwater Remedy

Assessment of Corrective Measures

Site Remains in Assessment Monitoring § 257.95(d)

Groundwater Remedy

Site Remains in Assessment Monitoring § 257.95(d)

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1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations (CFR) 257, Subpart D), Southern Company Services (SCS) has prepared this *2020 Annual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities at Mississippi Power Company (MPC) Plant Daniel Ash Pond B (AP-B).

Groundwater monitoring and reporting for the CCR unit is performed in accordance with the monitoring requirements of 40 CFR 257.90 through 257.95 of the Federal CCR rule. This report has been prepared to document the 2020 initial assessment sampling event and subsequent semi-annual groundwater monitoring events at the AP-B and to satisfy the requirements of § 257.90(e). Initial assessment monitoring, semi-annual monitoring, and associated reporting for AP-B is performed in accordance with the monitoring requirements § 257.90 through § 257.95.

2.0 SITE DESCRIPTION

The Site is located within Section 35, Township 5 South, Range 6 West, Sections 37, 10, 15, East half of Section 9, Southwest ¼ of Section 2, NW ¼ and south half of Section 11, and the north half and NW ¼ of the SW ¼ of Section 14, all of Township 6 South, Range 6 West. The Site is situated immediately northwest of the intersection of Mississippi State Highways 63 and 613, between the Pascagoula River to the west and Highway 63 to the east. The site address is 13201 Highway 63 N, Escatawpa, Mississippi 39562.

AP-B is located to the north of the main plant. **Figure 1, Site Location Map**, depicts the location of Plant Daniel relative to site features and the surrounding area.

2.1 Regional Geology & Hydrogeologic Setting

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

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

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

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

2.2 Uppermost Aquifer

Two aquifers supply water to the Pascagoula area. These are the Pliocene-age Citronelle and the Miocene Aquifer System, which includes the Graham Ferry Aquifer. Plant Daniel is located in the Citronelle outcrop area.

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

For groundwater monitoring purposes, the Unit 2 sand is the uppermost aquifer screened by site monitoring wells.

3.0 GROUNDWATER MONITORING SYSTEM AND ACTIVITY

Pursuant to § 257.91, MPC installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer (Unit 2). The Professional Engineer (PE)-certified groundwater monitoring system for AP-B is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. As required by § 257.90(e), the following also describes monitoring-related activities performed during the preceding year.

3.1 Groundwater Monitoring System

The groundwater monitoring network is comprised of 6 monitoring wells. Monitoring well locations are presented on **Figure 2, Monitoring Well Location Map**. **Table 1, Monitoring Well and Piezometer Summary**, summarizes the monitoring well construction details and design purpose for the AP-B.

Monitoring well locations BAW-1 and BAW-2A serve as upgradient locations for the Ash Pond. Upgradient wells are screened within the same uppermost aquifer as downgradient locations and are representative of background groundwater quality at the site. Monitoring well locations BAW-3 through BAW-7 are utilized as downgradient locations for AP-B. Downgradient locations were determined by water level monitoring and potentiometric surface maps constructed for the site.

3.2 Monitoring Well Installation and Maintenance

There was no change to the groundwater monitoring system in 2020; the network remained the same as in the previous reporting year. Monitoring well-related activities were limited to visual inspection of well conditions prior to sampling, recording the site conditions, and performing exterior maintenance to perform sampling under safe and clean conditions.

3.3 Assessment Monitoring

Pursuant to 40 CFR § 257.95(a), monitoring wells were sampled for all Appendix IV parameters in February 2020. Within 90 days of obtaining results, the first semi-annual assessment monitoring event was completed by sampling monitoring wells for Appendix III and detected Appendix IV parameters in April 2020. The semi-annual monitoring was repeated in October pursuant to 40 CFR §257.95(d). Analytical data from the initial assessment and semi-annual monitoring events are included as **Appendix A, Laboratory Analytical and Field Sampling Reports**, in accordance with the requirements of § 257.90(e)(3).

4.0 SAMPLE METHODOLOGY & ANALYSIS

The following describes the methods used to complete groundwater monitoring at AP-B.

4.1 Groundwater Flow Direction, Gradient, and Velocity

Prior to each sampling event, groundwater levels were measured and recorded to the nearest 0.01 foot within a 24-hour period. Groundwater levels recorded during the monitoring events are summarized in **Table 2, Groundwater Elevations Summary - 2020**. Groundwater levels and top of casing elevations were used to calculate groundwater elevation and develop the potentiometric surface elevation contour map provided as **Figures 3 through 5, Potentiometric Surface Contour Map(s)**. As shown on Figures 3 through 5, the general direction of groundwater flow is southwest. The groundwater flow pattern observed during the 2020 monitoring events is consistent with historic observations.

Groundwater flow rates at the site were calculated based on hydraulic gradients, hydraulic conductivity from previous slug test results, and an estimated effective porosity of the screened horizon. Based on slug test data collected from AP-B wells, the average hydraulic conductivity at the site is 25.09 feet per day. The hydraulic gradient was calculated between well pairs shown on **Table 3, Groundwater Flow Velocity Calculations - 2020**. An effective porosity of 0.2 was used based on the default values for effective porosity recommended by USEPA for a silty sand-type soil (U.S. USEPA, 1996).

Horizontal flow velocity was calculated using the commonly-used derivative of Darcy's Law:

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

Where:

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$
K = Average permeability of the aquifer $\left(\frac{feet}{day}\right)$
i = Horizontal hydraulic gradient
n_e = Effective porosity

Using this equation, groundwater flow velocities are calculated for various areas of the site and are tabulated on **Table 3**.

Groundwater monitoring wells BAW-1 and BAW-5 were used as points for calculating Flow Path A and BAW-3 and BAW-5 were used to calculate Flow Path B. The horizontal hydraulic gradients range from 0.0012 ft/ft to 0.0018 ft/ft. As presented on **Table 3,** groundwater flow velocity at the site ranges from approximately 0.1505 feet/day (or approximately 54.95 feet/year) to 0.2258 feet/day (or approximately

82.42 feet/year) across AP-B. These calculated groundwater flow velocities are consistent with historical calculations and with expected velocities.

4.2 Groundwater Sampling

Groundwater samples were collected from monitoring wells using low-flow sampling procedures in accordance with § 257.93(a). All monitoring wells at the Site are equipped with a dedicated pump. Monitoring wells were purged and sampled using low-flow sampling procedures whereby samples are collected when field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen) were measured to determine stabilization. Groundwater samples were collected when the following stabilization criteria were met:

- 0.2 standard units for pH
- 5% for specific conductance
- 0.2 mg/L or 10% for DO > 0.5 mg/l (whichever is greater)
- Turbidity measurements less than 5 NTU
- Temperature and ORP – record only, no stabilization criteria

During purging and sampling a SmarTroll instrument was used to monitor and record field parameters. Once stabilization was achieved, samples were collected and submitted to the laboratory following standard chain-of-custody (COC) protocol.

4.3 Laboratory Analysis

Laboratory analyses was performed by Eurofins Environmental Testing TestAmerica, Inc. (TAL) of Pittsburgh, Pennsylvannia and St. Louis, Missouri. TAL is accredited by National Environmental Laboratory Accreditation Program (NELAP). TestAmerica maintains a NELAP certification for all parameters analyzed for this project. Groundwater analytical data and chain-of-custody records for the monitoring events are presented in **Appendix A**.

4.4 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 detection samples. Equipment blanks and duplicate samples were also collected during each sampling event. QA/QC sample data was evaluated during data validation and is included in **Appendix A**. When values are followed by a "J" flag, this indicates that the value is an estimated analyte concentration detected between the method detection limit (MDL) and the laboratory reporting limit (RL). The estimated value is positively identified but is below lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions.

Analytical precision is measured through the calculation of the relative percent difference (RPD) of two data sets generated from a similar source. Here, a comparison of results between samples and field duplicate samples are used as measure of laboratory precision. For groundwater analytical data, quality control procedures include calculating the relative percent difference (Where field duplicates are collected, the RPD) between the sample and duplicate sample duplicate concentrations. This is calculated as:

$$RPD = \frac{Conc1 - Conc2}{(Conc1 + Conc2)/2}$$

Where:

RPD = Relative Percent Difference (%)

Conc1 = Higher concentration of the sample or field duplicate

Conc2 = Lower concentration of the sample or field duplicate

Relative percent differences are calculated for all detected concentrations above the laboratory RL. Where the RPD is below 20%, the difference is considered acceptable and no further action is needed. Where an RPD is greater than 20%, further evaluation is required to attempt to determine the cause of the difference and potentially result in qualified data. **Table 4, Relative Percent Difference Calculations**, provides the relative percent differences for sample and sample duplicates during 2020 sampling events.

RPD greater than 20% were noted for TDS in duplicates in both semi-annual events and boron in the second semi-annual event. However, both results reviewed were less than 5 times the reporting limit (RL) and differences between original and duplicate were less than the RL. Therefore, no validation flag or qualifier was necessary for the TDS and boron results.

5.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III and IV groundwater monitoring data was performed on samples collected from the certified groundwater monitoring network pursuant to 40 CFR § 257.93 and following the appropriate PE-certified method. The statistical method used at the site was developed by Groundwater Stats Consulting, LLC. (GSC), in accordance with 40 CFR § 257.93(f) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, EPA 530/R-09-007 (USEPA, 2009). Results are included in **Appendix B, Statistical Data Evaluation.**

5.1 Statistical Methodology and Test

The Sanitas Groundwater statistical software is used to perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by EPA regulations. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the USEPA Unified Guidance (2009).

5.1.1 Appendix III Evaluation

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for each of the Appendix III parameters. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent, and the most recent sample from each downgradient well is compared to the same limit for each parameter When an initial (or apparent) statistically significant increase or questionable result occurs, a second sample may be collected to verify the initial result or determine if the result was an outlier. If the second sample exceeds its respective background statistical limit, a statistically significant increase (SSI) is identified. If the second sample is below its respective background limit there is no SSI. A summary table of the statistical limits accompanies the prediction limits in **Appendix B.**

5.1.2 Appendix IV Evaluation

When in assessment monitoring, Appendix IV constituents are sampled semi-annually, and concentrations are compared to GWPS. Unlike the statistical evaluation of Appendix III constituents (where single-sample results are compared to the statistical limit), Appendix IV analysis uses the pooled results from each downgradient well to develop a well-specific Confidence Interval that is compared to the statistical limit. The statistical limit is either the tolerance limit (i.e. background) calculated using the pool of all available upgradient well data (see Chapter 7 of the Unified Guidance), or an applicable groundwater protection standard such as the MCL. Appendix IV background data are screened for outliers and extreme trending patterns that would lead to artificially elevated statistical limits.

Parametric tolerance limits (i.e. UTLs) were calculated using pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent on the number of background samples. The UTLs were then used as the GWPS.

As described in § 257.95(h)(1)-(3), the GWPS is:

(1) The maximum contaminant level (MCL) established under § 141.62 and 141.66 of this title.
(2) Where an MCL has not been established:
    (i) Cobalt 0.006 milligrams per liter (mg/L);
    (ii) Lead 0.015 mg/L;
    (iii) Lithium 0.040 mg/L; and
    (iv) Molybdenum 0.100 mg/L.
(3) Background levels for constituents were the background level is higher than the MCL or rule-identified GWPS.

Following the above requirements, GWPS have been established for statistical comparison of Appendix IV constituents.

5.2 Statistical Analysis Results

Analytical data from the 2020 semi-annual monitoring events in April and October were statistically analyzed in accordance with the PE-certified Statistical Analysis Plan (October 2017) and Statistical Background Updates performed by GSC (December 2019). Appendix III statistical analysis was performed to determine if constituents have returned to background levels. Appendix IV assessment monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

5.2.1 Appendix III Constituents

A review of the Sanitas results presented in **Appendix B,** identified the following Appendix III SSIs during the first semi-annual monitoring event:

- BAW-3: Chloride
- BAW-4: Calcium
- BAW-5: Boron, Calcium, Chloride, pH, and Total Dissolved Solids

During the second semi-annual monitoring event the following SSIs over background:

- BAW-3: Chloride
- BAW-4: Calcium

- BAW-5: Boron, Calcium, Chloride, pH, and Total Dissolved Solids

Since the site is performing assessment monitoring, no further action is required regarding these SSIs.

5.2.2 Appendix IV Constituents

Table 5, Summary of Background Levels and Groundwater Protection Standards, summarizes the background limit established at each monitoring well and the GWPS used for statistical comparison. To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV parameters in each downgradient well. Those confidence intervals were compared to the GWPS. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its respective standard.

Using GWPS established according to 40 CFR §257.95(h), statistical analysis of Appendix IV data identified the following SSL of a GWPS at the listed well:

- BAW-5: Lithium

In accordance with §257.95(g), a notification identifying the SSLs for lithium was placed in the facility's Operating Record on November 14, 2018.

6.0 ALTERNATE SOURCE DEMONSTRATION

In accordance with 40 CFR § 257.95(g)(3)(ii), an alternate source demonstration (ASD) was prepared for lithium at AP-B. The ASD was completed by July 12, 2019 and submitted in the *2019 Annual Groundwater Monitoring and Corrective Action Report*. Information presented in the ASD explains that a source other than the CCR unit (AP-B) caused the SSL of lithium found in BAW-5. Therefore, pursuant to §257.95(g)(3)(ii), an assessment of corrective measures is not required, and AP-B will remain in assessment monitoring.

7.0 MONITORING PROGRAM STATUS

In accordance with § 257.94(e) MPC implemented assessment monitoring in January 2018. SSIs of Appendix III and SSLs of Appendix IV parameters were identified at AP-B during sampling events conducted in 2020. An ASD was completed for the Appendix IV constituent exceeding the GWPS in July 12, 2019.

Therefore, in accordance with §257.95(g)(3)(ii), MPC will continue assessment monitoring.

8.0 CONCLUSIONS & FUTURE ACTIONS

Semi-annual assessment monitoring and associated reporting for Plant Daniel AP-B is performed in accordance with the monitoring requirements § 257.90 through § 257.95. The certified compliance monitoring well network was resampled on a semi-annual basis and were analyzed for Appendix III and IV parameters. Statistical evaluations of the April and October 2020 assessment monitoring data identified lithium SSL's of Appendix IV constituents above the GWPS. An ASD was prepared to address lithium GWPS exceedances at compliance well BAW-5. The ASD was completed by July 12, 2019 in accordance with § 257.95(g)(3)(ii) and submitted in the *2019 Annual Groundwater Monitoring and Corrective Action Report*. Therefore, in accordance with § 257.95(d), MPC will continue assessment monitoring.

The following future actions will be taken or are recommended for the Site:

- The first semi-annual assessment monitoring event is planned for March or April 2021.
- The second semi-annual assessment monitoring event is planned for September or October 2021.
- Submit the 2021 Annual Groundwater and Corrective Report by January 31, 2022.

9.0 REFERENCES

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Wasson, B.E., 1978, Availability of additional ground-water supplies in the Pascagoula area, Mississippi: Mississippi Research and Development Center Bulletin, 32 p.

Tables

Table 1.
Monitoring Well Network Summary

Well ID	Purpose	Installation Date	Northing	Easting	Total Hole Depth (feet)	Top of Casing Elevation (feet MSL)	Ground Elevation (feet MSL)	Top of Screen Elevation (feet MSL)	Bottom of Screen Elevation (feet MSL)
BAW-1	Upgradient	7/23/2015	378973.19	1071575.49	57.70	32.24	29.22	-23.18	-28.18
BAW-2	Upgradient	7/23/2015	378234.35	1071589.35	62.70	42.43	39.70	-11.80	-21.80
BAW-2A	Upgradient	3/19/2018	378214.26	1071589.08	65.00	41.15	38.22	-15.28	-25.28
BAW-3	Downgradient	7/23/2015	377405.45	1071551.84	65.50	40.62	37.60	-16.70	-26.70
BAW-4	Downgradient	7/23/2015	377377.67	1071040.27	67.10	37.05	34.12	-21.78	-31.78
BAW-5	Downgradient	7/23/2015	377496.76	1070602.22	66.60	39.93	37.41	-18.89	-28.89
BAW-7	Downgradient	7/23/2015	378708.69	1071263.91	60.30	35.05	32.19	-18.01	-28.01
PZ-8	Piezometer	3/14/2018	377423.77	1070652.62	65.50	40.05	37.26	-17.74	-27.74
PZ-9	Piezometer	3/15/2018	377385.47	1070625.84	60.00	39.32	36.50	-13.00	-23.00

Notes:

1. BAW-2 was replaced by BAW-2A due to well damage.

2. Northing and Easting are referenced to MS SPCS (NAD 83) East Zone U.S. Survey Feet (2301).

3. Elevations shown are referenced Mean Sea Level (MSL) to NAVD 88 (G12) U.S. Survey Feet.

4. MSL refers to Mean Sea Level.

Table 3.
Groundwater Elevations Summary - 2020

Well ID	Top of Casing Elevation (feet MSL)	Groundwater Elevations (feet MSL)		
		February 21, 2020	April 13, 2020	October 21, 2020
BAW-1	32.24	9.32	8.27	8.60
BAW-2A	41.15	8.89	7.85	8.20
BAW-3	40.62	8.75	7.75	8.10
BAW-4	37.05	7.65	6.62	6.98
BAW-5	39.93	7.20	5.99	6.33
BAW-7	35.05	8.73	7.63	8.08
PZ-8	40.05	7.35	6.25	6.60
PZ-9	39.32	7.34	6.22	6.56

Notes:

1. MSL refers to Mean Sea Level

Table 3.
Groundwater Flow Velocity Calculations - 2020

Flow Path A								
	BAW-1 h_1 **(ft)**	**BAW-5** h_2 **(ft)**	**Distance** Δl **(ft)**	**Hydraulic Gradient** $\Delta h/\Delta l$ **(ft/ft)**	**Hydraulic Conductivity K**	**Assumed Effective Porosity (ne)**	**Calculated Groundwater Flow Velocity (feet/day)**	**Calculated Groundwater Flow Velocity (feet/year)**
February 21, 2020	9.32	7.20	1764	0.0012	25.09	0.2	0.1505	54.95
April 13, 2020	8.27	5.99	1764	0.0013	25.09	0.2	0.1631	59.53
October 21, 2020	8.60	6.33	1764	0.0013	25.09	0.2	0.1631	59.53

Flow Path B								
	BAW-3 h_1 **(ft)**	**BAW-5** h_2 **(ft)**	**Distance** Δl **(ft)**	**Hydraulic Gradient** $\Delta h/\Delta l$ **(ft/ft)**	**Hydraulic Conductivity K**	**Assumed Effective Porosity (ne)**	**Calculated Groundwater Flow Velocity (feet/day)**	**Calculated Groundwater Flow Velocity (feet/year)**
February 21, 2020	8.75	7.20	960	0.0016	25.09	0.2	0.2007	73.26
April 13, 2020	7.75	5.99	960	0.0018	25.09	0.2	0.2258	82.42
October 21, 2020	8.10	6.33	960	0.0018	25.09	0.2	0.2258	82.42

Notes:
ft=feet
ft/d = feet/day
ft/ft = feet per foot
ft/yr = feet per year

Table 4.
Relative Percent Difference Calculations

1st Semi-Annual Monitoring Event				
Parameter	**Units**	**Monitoring Point Identification**		**Relative Percent Difference (RPD %)**
		BAW-2A	**DUP-02**	
Barium	mg/L	0.0394	0.0384	2.6
Calcium	mg/L	0.67	0.636	5.2
Chloride	mg/L	7.57	7.49	1.1
TDS	mg/L	38	31	**20.3**
Sulfate	mg/L	2.71	2.61	3.8

2nd Semi-Annual Monitoring Event				
Parameter	**Units**	**Monitoring Point Identification**		**Relative Percent Difference (RPD %)**
		BAW-2A	**DUP-01**	
Barium	mg/L	0.0334	0.0338	1.2
Calcium	mg/L	0.672	0.667	0.7
Chloride	mg/L	7.59	7.03	7.7
TDS	mg/L	48	52	8.0
Sulfate	mg/L	3.97	3.64	8.7

Parameter	**Units**	**Monitoring Point Identification**		**Relative Percent Difference (RPD %)**
		BAW-8	**DUP-02**	
Barium	mg/L	0.0242	0.0246	1.6
Boron	mg/L	0.162	0.119	**30.6**
Calcium	mg/L	11.5	11.2	2.6
Chloride	mg/L	8.19	8.03	2.0
TDS	mg/L	78	64	19.7
Lithium	mg/L	0.13	0.131	0.8
Sulfate	mg/L	2.56	2.43	5.2

Table 5.
Summary of Background Levels and Groundwater Protection Standards

Analyte	Units	Background	Rule-Identified GWPS
Antimony	mg/L	0.002	0.006
Arsenic	mg/L	0.001	0.01
Barium	mg/L	0.041	2
Beryllium	mg/L	0.0025	0.004
Cadmium	mg/L	0.0025	0.005
Chromium	mg/L	0.0029	0.1
Cobalt	mg/L	0.0013	0.006
Combined Radium-226/228	pCi/L	2.5	5
Fluoride	mg/L	0.1	4
Lead	mg/L	0.001	0.015
Lithium	mg/L	0.0051	0.04
Mercury	mg/L	0.0002	0.002
Molybdenum	mg/L	0.015	0.1
Selenium	mg/L	0.005	0.05
Thallium	mg/L	0.001	0.002

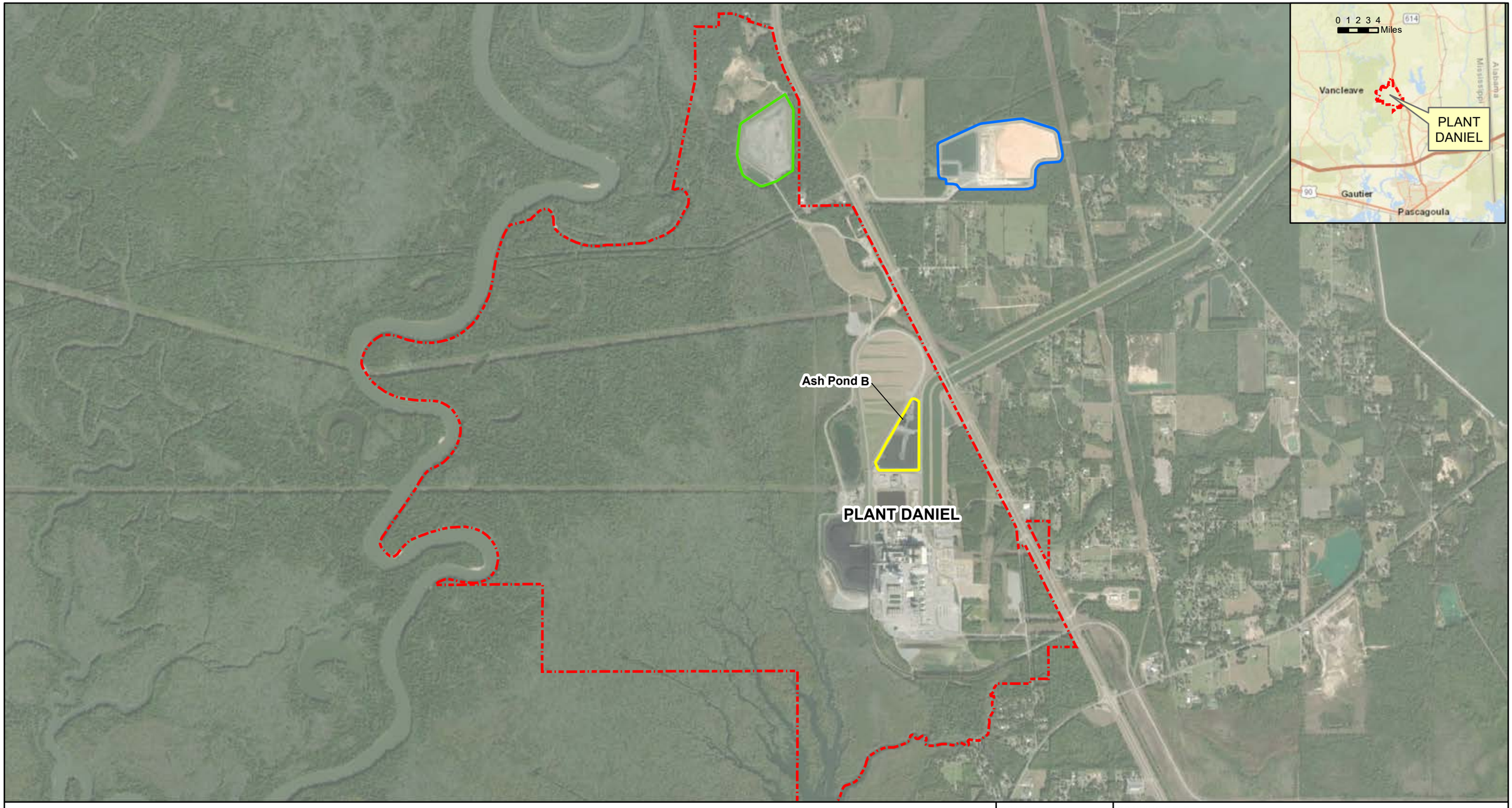
Note:

1.Where 2 numbers are present, they denote the different background levels and background-derived

GWPS for each of the 2 semi-annual monitoring events in the order that they were determined.

2. If background is less than the rule-identified GWPS; therefore, the rule-identified GWPS were used for statistical analysis.

Figures



Legend

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

N

0 1,000 2,000 4,000 6,000 8,000 Feet

SCALE	1:24000
DATE	12/28/2020
DRAWN BY	KAR
CHECKED BY	LMP

DRAWING TITLE

SITE LOCATION MAP
PLANT DANIEL ASH POND B

FIGURE NO

FIGURE 1

Southern Company

Legend

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

N

0 250 500 1,000 Feet

SCALE	1:3000
DATE	12/28/2020
DRAWN BY	KAR
CHECKED BY	LMP

DRAWING TITLE

WELL LOCATION MAP
PLANT DANIEL ASH POND B

FIGURE NO

FIGURE 2

Southern Company

Legend

- Monitoring Well Location
- Ash Pond B Boundary
- Estimated Potentiometric Contour (ft NAVD88)
- Approximate Direction of Groundwater Flow
- Property Boundary (Approximate)

BAW-1 Well Name
9.32 Groundwater Elevation (ft NAVD88)

N

0 250 500 1,000 Feet

Note: ft NAVD88 indicates feet relative to the North American Vertical Datum of 1988.

SCALE	1:3000
DATE	12/28/2020
DRAWN BY	KAR
CHECKED BY	LPC

DRAWING TITLE

POTENTIOMETRIC SURFACE CONTOUR MAP
FEBRUARY 21, 2020
PLANT DANIEL ASH POND B

FIGURE NO

FIGURE 3

Southern Company

Legend

- Monitoring Well Location
- Ash Pond B Boundary
- Estimated Potentiometric Contour (ft NAVD88)
- Approximate Direction of Groundwater Flow
- Property Boundary (Approximate)

BAW-1 Well Name
8.27 Groundwater Elevation (ft NAVD88)

N

0 250 500 1,000 Feet

Note: ft NAVD88 indicates feet relative to the North American Vertical Datum of 1988.

SCALE	1:3000
DATE	12/28/2020
DRAWN BY	KAR
CHECKED BY	LPC

DRAWING TITLE

POTENTIOMETRIC SURFACE CONTOUR MAP
APRIL 13, 2020
PLANT DANIEL ASH POND B

FIGURE NO

FIGURE 4

Southern Company

Legend

- Monitoring Well Location
- Ash Pond B Boundary
- Estimated Potentiometric Contour (ft NAVD88)
- Approximate Direction of Groundwater Flow
- Property Boundary (Approximate)

BAW-1 Well Name
8.60 Groundwater Elevation (ft NAVD88)

N

0 250 500 1,000 Feet

Note: ft NAVD88 indicates feet relative to the North American Vertical Datum of 1988.

SCALE	1:3000
DATE	12/28/2020
DRAWN BY	KAR
CHECKED BY	LPC

DRAWING TITLE

POTENTIOMETRIC SURFACE CONTOUR MAP
OCTOBER 21, 2020
PLANT DANIEL ASH POND B

FIGURE NO

FIGURE 5

Southern Company

Appendix A

Initial Assessment Monitoring Event

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-102787-1
Client Project/Site: CCR - Plant Daniel - Ash Pond B

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty

Authorized for release by:
3/16/2020 11:52:05 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

PA Lab ID: 02-00416

Table of Contents

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Job ID: 180-102787-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-102787-1

Comments
No additional comments.

Receipt
The samples were received on 2/25/2020 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.4º C, 1.7º C and 4.4º 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.

Definitions/Glossary

Client: Southern Company
Job ID: 180-102787-1
Project/Site: CCR - Plant Daniel - Ash Pond B

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.
¤	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
Job ID: 180-102787-1
Project/Site: CCR - Plant Daniel - Ash Pond B

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-102787-1	BAW-1	Water	02/21/20 10:10	02/25/20 09:00	
180-102787-2	BAW-2A	Water	02/21/20 11:12	02/25/20 09:00	
180-102787-3	BAW-3	Water	02/21/20 12:30	02/25/20 09:00	
180-102787-4	BAW-4	Water	02/22/20 10:10	02/25/20 09:00	
180-102787-5	BAW-5	Water	02/22/20 07:10	02/25/20 09:00	
180-102787-6	BAW-7	Water	02/21/20 17:00	02/25/20 09:00	
180-102787-7	DUP-01	Water	02/21/20 09:10	02/25/20 09:00	
180-102787-8	FB-01	Water	02/21/20 11:05	02/25/20 09:00	
180-102787-9	EB-01	Water	02/22/20 08:45	02/25/20 09:00	
180-102787-10	BAW-8	Water	02/22/20 08:05	02/25/20 09:00	
180-102787-11	BAW-9	Water	02/22/20 09:12	02/25/20 09:00	
180-102787-12	DUP-02	Water	02/22/20 07:05	02/25/20 09:00	

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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 Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: BAW-1

Date Collected: 02/21/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-1

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			308983	03/05/20 10:20	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 13:33	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:35	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: BAW-2A

Date Collected: 02/21/20 11:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-2

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			308983	03/05/20 11:05	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 13:49	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 09:42	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:36	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: BAW-3

Date Collected: 02/21/20 12:30
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-3

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			308983	03/05/20 16:18	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 13:51	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 09:45	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:37	NAM	TAL PIT
	Instrument ID: HGZ									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: BAW-4

Date Collected: 02/22/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-4

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			308983	03/05/20 16:33	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 13:54	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 09:47	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:38	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: BAW-5

Date Collected: 02/22/20 07:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-5

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			309066	03/06/20 07:18	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 13:56	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 09:50	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:39	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: BAW-7

Date Collected: 02/21/20 17:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-6

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			309066	03/06/20 08:02	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 13:59	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 09:57	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:40	NAM	TAL PIT
	Instrument ID: HGZ									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: DUP-01
Date Collected: 02/21/20 09:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-7
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			308983	03/05/20 12:50	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 14:01	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 10:04	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:41	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: FB-01
Date Collected: 02/21/20 11:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-8
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			309066	03/06/20 08:32	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 14:04	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 10:07	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308806	03/03/20 14:29	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 14:42	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: EB-01
Date Collected: 02/22/20 08:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-9
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			309066	03/06/20 08:47	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 14:06	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 10:09	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308809	03/03/20 14:32	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 13:51	NAM	TAL PIT
	Instrument ID: HGZ									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: BAW-8
Date Collected: 02/22/20 08:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-10
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			309066	03/06/20 09:02	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 14:09	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 10:12	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308809	03/03/20 14:32	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 13:52	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: BAW-9
Date Collected: 02/22/20 09:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-11
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			309066	03/06/20 09:47	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 14:16	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 10:14	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308809	03/03/20 14:32	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308945	03/04/20 13:53	NAM	TAL PIT
	Instrument ID: HGZ									

Client Sample ID: DUP-02
Date Collected: 02/22/20 07:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-12
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			309066	03/06/20 10:02	MJH	TAL PIT
	Instrument ID: CHICS2000									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309083	03/05/20 14:18	RSK	TAL PIT
	Instrument ID: NEMO									
Total Recoverable	Prep	3005A			50 mL	50 mL	308788	03/03/20 13:06	JL	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			309151	03/06/20 10:17	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Prep	7470A			50 mL	50 mL	308666	03/02/20 14:12	NAM	TAL PIT
Total/NA	Analysis	EPA 7470A		1			308803	03/03/20 14:00	NAM	TAL PIT
	Instrument ID: HGZ									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

JL = James Lyu

NAM = Nicole Marfisi

Batch Type: Analysis

MJH = Matthew Hartman

NAM = Nicole Marfisi

RSK = Robert Kurtz

Client Sample ID: BAW-1

Date Collected: 02/21/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-1
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/05/20 10:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:33	1
Boron	**0.0928**		0.0800	0.0386	mg/L		03/03/20 13:06	03/05/20 13:33	1
Barium	**0.0327**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:33	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:33	1
Calcium	**1.02**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:33	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:33	1
Cobalt	**0.000730**	**J**	0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:33	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:33	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:33	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:33	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:33	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:33	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:33	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:33	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:35	1

Client Sample ID: BAW-2A

Date Collected: 02/21/20 11:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-2
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/05/20 11:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:49	1
Boron	**0.0589**	**J**	0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 09:42	1
Barium	**0.0373**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:49	1
Beryllium	**0.000207**	**J**	0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:49	1
Calcium	**0.648**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:49	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:49	1
Cobalt	**0.000909**	**J**	0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:49	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:49	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:49	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:49	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:49	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:49	1
Thallium	**0.000486**	**J**	0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:49	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:49	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:36	1

Client Sample ID: BAW-3

Date Collected: 02/21/20 12:30
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-3

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/05/20 16:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:51	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 09:45	1
Barium	**0.0304**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:51	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:51	1
Calcium	**0.841**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:51	1
Cadmium	**0.000962**	**J**	0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:51	1
Cobalt	**0.00576**		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:51	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:51	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:51	1
Lead	**0.000150**	**J**	0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:51	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:51	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:51	1
Thallium	**0.000276**	**J**	0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:51	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:51	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:37	1

Client Sample ID: BAW-4

Date Collected: 02/22/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-4

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.0317**	**J**	0.100	0.0263	mg/L			03/05/20 16:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.000837**	**J**	0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:54	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 09:47	1
Barium	**0.0108**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:54	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:54	1
Calcium	**3.86**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:54	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:54	1
Cobalt	**0.000907**	**J**	0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:54	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:54	1
Molybdenum	**0.000616**	**J**	0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:54	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:54	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:54	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:54	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:54	1
Lithium	**0.0211**		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:54	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:38	1

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: BAW-5

Date Collected: 02/22/20 07:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-5
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.0434**	**J**	0.100	0.0263	mg/L			03/06/20 07:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00177**		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:56	1
Boron	**0.193**		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 09:50	1
Barium	**0.0453**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:56	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:56	1
Calcium	**15.0**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:56	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:56	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:56	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:56	1
Molybdenum	**0.000627**	**J**	0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:56	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:56	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:56	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:56	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:56	1
Lithium	**0.169**		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:56	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:39	1

Client Sample ID: BAW-7

Date Collected: 02/21/20 17:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-6
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 08:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:59	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 09:57	1
Barium	**0.0117**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:59	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:59	1
Calcium	**0.552**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:59	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:59	1
Cobalt	**0.000634**	**J**	0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:59	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:59	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:59	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:59	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:59	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:59	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:59	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:59	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:40	1

Client Sample ID: DUP-01

Date Collected: 02/21/20 09:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-7
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/05/20 12:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 14:01	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 10:04	1
Barium	**0.0307**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 14:01	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 14:01	1
Calcium	**1.03**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 14:01	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 14:01	1
Cobalt	**0.000693**	**J**	0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 14:01	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 14:01	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 14:01	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 14:01	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 14:01	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 14:01	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 14:01	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 14:01	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:41	1

Client Sample ID: FB-01

Date Collected: 02/21/20 11:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-8
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 08:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 14:04	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 10:07	1
Barium	<0.00160		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 14:04	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 14:04	1
Calcium	<0.127		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 14:04	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 14:04	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 14:04	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 14:04	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 14:04	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 14:04	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 14:04	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 14:04	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 14:04	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 14:04	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:42	1

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: EB-01

Lab Sample ID: 180-102787-9

Date Collected: 02/22/20 08:45

Matrix: Water

Date Received: 02/25/20 09:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 08:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 14:06	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 10:09	1
Barium	<0.00160		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 14:06	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 14:06	1
Calcium	<0.127		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 14:06	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 14:06	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 14:06	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 14:06	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 14:06	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 14:06	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 14:06	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 14:06	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 14:06	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 14:06	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:32	03/04/20 13:51	1

Client Sample ID: BAW-8

Lab Sample ID: 180-102787-10

Date Collected: 02/22/20 08:05

Matrix: Water

Date Received: 02/25/20 09:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 09:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 14:09	1
Boron	**0.142**		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 10:12	1
Barium	**0.0270**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 14:09	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 14:09	1
Calcium	**11.8**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 14:09	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 14:09	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 14:09	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 14:09	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 14:09	1
Lead	**0.00194**		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 14:09	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 14:09	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 14:09	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 14:09	1
Lithium	**0.121**		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 14:09	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:32	03/04/20 13:52	1

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

Client Sample ID: BAW-9

Date Collected: 02/22/20 09:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-11
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 09:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.000691**	**J**	0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 14:16	1
Boron	**0.172**		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 10:14	1
Barium	**0.0217**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 14:16	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 14:16	1
Calcium	**8.42**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 14:16	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 14:16	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 14:16	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 14:16	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 14:16	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 14:16	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 14:16	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 14:16	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 14:16	1
Lithium	**0.103**		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 14:16	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:32	03/04/20 13:53	1

Client Sample ID: DUP-02

Date Collected: 02/22/20 07:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-12
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 10:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 14:18	1
Boron	**0.132**		0.0800	0.0386	mg/L		03/03/20 13:06	03/06/20 10:17	1
Barium	**0.0272**		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 14:18	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 14:18	1
Calcium	**12.0**		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 14:18	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 14:18	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 14:18	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 14:18	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 14:18	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 14:18	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 14:18	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 14:18	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 14:18	1
Lithium	**0.122**		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 14:18	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/02/20 14:12	03/03/20 14:00	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-308983/6
Matrix: Water
Analysis Batch: 308983

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/05/20 09:06	1

Lab Sample ID: LCS 180-308983/5
Matrix: Water
Analysis Batch: 308983

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.50	2.324		mg/L		93	90 - 110

Lab Sample ID: 180-102787-1 MS
Matrix: Water
Analysis Batch: 308983

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.0263		1.25	1.153		mg/L		92	80 - 120

Lab Sample ID: 180-102787-1 MSD
Matrix: Water
Analysis Batch: 308983

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.0263		1.25	1.117		mg/L		89	80 - 120	3	20

Lab Sample ID: MB 180-309066/6
Matrix: Water
Analysis Batch: 309066

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0263		0.100	0.0263	mg/L			03/06/20 07:03	1

Lab Sample ID: LCS 180-309066/5
Matrix: Water
Analysis Batch: 309066

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.50	2.502		mg/L		100	90 - 110

Lab Sample ID: 180-102787-5 MS
Matrix: Water
Analysis Batch: 309066

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.0434	J	1.25	1.349		mg/L		104	80 - 120

Lab Sample ID: 180-102787-5 MSD
Matrix: Water
Analysis Batch: 309066

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.0434	J	1.25	1.364		mg/L		106	80 - 120	1	20

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-308788/1-A
Matrix: Water
Analysis Batch: 309083

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 308788

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		03/03/20 13:06	03/05/20 13:01	1
Boron	<0.0386		0.0800	0.0386	mg/L		03/03/20 13:06	03/05/20 13:01	1
Barium	<0.00160		0.0100	0.00160	mg/L		03/03/20 13:06	03/05/20 13:01	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		03/03/20 13:06	03/05/20 13:01	1
Calcium	<0.127		0.500	0.127	mg/L		03/03/20 13:06	03/05/20 13:01	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		03/03/20 13:06	03/05/20 13:01	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		03/03/20 13:06	03/05/20 13:01	1
Chromium	<0.00153		0.00200	0.00153	mg/L		03/03/20 13:06	03/05/20 13:01	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		03/03/20 13:06	03/05/20 13:01	1
Lead	<0.000128		0.00100	0.000128	mg/L		03/03/20 13:06	03/05/20 13:01	1
Antimony	<0.000378		0.00200	0.000378	mg/L		03/03/20 13:06	03/05/20 13:01	1
Selenium	<0.00151		0.00500	0.00151	mg/L		03/03/20 13:06	03/05/20 13:01	1
Thallium	<0.000148		0.00100	0.000148	mg/L		03/03/20 13:06	03/05/20 13:01	1
Lithium	<0.00339		0.00500	0.00339	mg/L		03/03/20 13:06	03/05/20 13:01	1

Lab Sample ID: LCS 180-308788/2-A
Matrix: Water
Analysis Batch: 309083

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 308788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.9881		mg/L		99	80 - 120
Barium	1.00	0.9981		mg/L		100	80 - 120
Beryllium	0.500	0.4912		mg/L		98	80 - 120
Calcium	25.0	25.56		mg/L		102	80 - 120
Cadmium	0.500	0.5151		mg/L		103	80 - 120
Cobalt	0.500	0.4686		mg/L		94	80 - 120
Chromium	0.500	0.4931		mg/L		99	80 - 120
Molybdenum	0.500	0.5001		mg/L		100	80 - 120
Lead	0.500	0.4931		mg/L		99	80 - 120
Antimony	0.250	0.2384		mg/L		95	80 - 120
Selenium	1.00	0.8871		mg/L		89	80 - 120
Thallium	1.00	1.048		mg/L		105	80 - 120
Lithium	0.500	0.4981		mg/L		100	80 - 120

Lab Sample ID: LCS 180-308788/2-A
Matrix: Water
Analysis Batch: 309151

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 308788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.25	1.224		mg/L		98	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-308666/1-A
Matrix: Water
Analysis Batch: 308803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308666

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/02/20 14:12	03/03/20 13:37	1

Method: EPA 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 180-308666/2-A
Matrix: Water
Analysis Batch: 308803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308666

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.002793		mg/L		112	80 - 120

Lab Sample ID: MB 180-308806/1-A
Matrix: Water
Analysis Batch: 308945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:29	03/04/20 14:16	1

Lab Sample ID: LCS 180-308806/2-A
Matrix: Water
Analysis Batch: 308945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.002351		mg/L		94	80 - 120

Lab Sample ID: MB 180-308809/1-A
Matrix: Water
Analysis Batch: 308945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308809

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000101		0.000200	0.000101	mg/L		03/03/20 14:32	03/04/20 13:49	1

Lab Sample ID: LCS 180-308809/2-A
Matrix: Water
Analysis Batch: 308945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308809

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.002356		mg/L		94	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-1

HPLC/IC

Analysis Batch: 308983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total/NA	Water	EPA 300.0 R2.1	
180-102787-2	BAW-2A	Total/NA	Water	EPA 300.0 R2.1	
180-102787-3	BAW-3	Total/NA	Water	EPA 300.0 R2.1	
180-102787-4	BAW-4	Total/NA	Water	EPA 300.0 R2.1	
180-102787-7	DUP-01	Total/NA	Water	EPA 300.0 R2.1	
MB 180-308983/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-308983/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-102787-1 MS	BAW-1	Total/NA	Water	EPA 300.0 R2.1	
180-102787-1 MSD	BAW-1	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 309066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-5	BAW-5	Total/NA	Water	EPA 300.0 R2.1	
180-102787-6	BAW-7	Total/NA	Water	EPA 300.0 R2.1	
180-102787-8	FB-01	Total/NA	Water	EPA 300.0 R2.1	
180-102787-9	EB-01	Total/NA	Water	EPA 300.0 R2.1	
180-102787-10	BAW-8	Total/NA	Water	EPA 300.0 R2.1	
180-102787-11	BAW-9	Total/NA	Water	EPA 300.0 R2.1	
180-102787-12	DUP-02	Total/NA	Water	EPA 300.0 R2.1	
MB 180-309066/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-309066/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-102787-5 MS	BAW-5	Total/NA	Water	EPA 300.0 R2.1	
180-102787-5 MSD	BAW-5	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 308666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-12	DUP-02	Total/NA	Water	7470A	
MB 180-308666/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-308666/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 308788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total Recoverable	Water	3005A	
180-102787-2	BAW-2A	Total Recoverable	Water	3005A	
180-102787-3	BAW-3	Total Recoverable	Water	3005A	
180-102787-4	BAW-4	Total Recoverable	Water	3005A	
180-102787-5	BAW-5	Total Recoverable	Water	3005A	
180-102787-6	BAW-7	Total Recoverable	Water	3005A	
180-102787-7	DUP-01	Total Recoverable	Water	3005A	
180-102787-8	FB-01	Total Recoverable	Water	3005A	
180-102787-9	EB-01	Total Recoverable	Water	3005A	
180-102787-10	BAW-8	Total Recoverable	Water	3005A	
180-102787-11	BAW-9	Total Recoverable	Water	3005A	
180-102787-12	DUP-02	Total Recoverable	Water	3005A	
MB 180-308788/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-308788/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Analysis Batch: 308803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-12	DUP-02	Total/NA	Water	EPA 7470A	308666
MB 180-308666/1-A	Method Blank	Total/NA	Water	EPA 7470A	308666
LCS 180-308666/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	308666

Prep Batch: 308806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total/NA	Water	7470A	
180-102787-2	BAW-2A	Total/NA	Water	7470A	
180-102787-3	BAW-3	Total/NA	Water	7470A	
180-102787-4	BAW-4	Total/NA	Water	7470A	
180-102787-5	BAW-5	Total/NA	Water	7470A	
180-102787-6	BAW-7	Total/NA	Water	7470A	
180-102787-7	DUP-01	Total/NA	Water	7470A	
180-102787-8	FB-01	Total/NA	Water	7470A	
MB 180-308806/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-308806/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 308809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-9	EB-01	Total/NA	Water	7470A	
180-102787-10	BAW-8	Total/NA	Water	7470A	
180-102787-11	BAW-9	Total/NA	Water	7470A	
MB 180-308809/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-308809/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 308945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total/NA	Water	EPA 7470A	308806
180-102787-2	BAW-2A	Total/NA	Water	EPA 7470A	308806
180-102787-3	BAW-3	Total/NA	Water	EPA 7470A	308806
180-102787-4	BAW-4	Total/NA	Water	EPA 7470A	308806
180-102787-5	BAW-5	Total/NA	Water	EPA 7470A	308806
180-102787-6	BAW-7	Total/NA	Water	EPA 7470A	308806
180-102787-7	DUP-01	Total/NA	Water	EPA 7470A	308806
180-102787-8	FB-01	Total/NA	Water	EPA 7470A	308806
180-102787-9	EB-01	Total/NA	Water	EPA 7470A	308809
180-102787-10	BAW-8	Total/NA	Water	EPA 7470A	308809
180-102787-11	BAW-9	Total/NA	Water	EPA 7470A	308809
MB 180-308806/1-A	Method Blank	Total/NA	Water	EPA 7470A	308806
MB 180-308809/1-A	Method Blank	Total/NA	Water	EPA 7470A	308809
LCS 180-308806/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	308806
LCS 180-308809/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	308809

Analysis Batch: 309083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total Recoverable	Water	EPA 6020	308788
180-102787-2	BAW-2A	Total Recoverable	Water	EPA 6020	308788
180-102787-3	BAW-3	Total Recoverable	Water	EPA 6020	308788
180-102787-4	BAW-4	Total Recoverable	Water	EPA 6020	308788
180-102787-5	BAW-5	Total Recoverable	Water	EPA 6020	308788
180-102787-6	BAW-7	Total Recoverable	Water	EPA 6020	308788

Metals (Continued)

Analysis Batch: 309083 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-7	DUP-01	Total Recoverable	Water	EPA 6020	308788
180-102787-8	FB-01	Total Recoverable	Water	EPA 6020	308788
180-102787-9	EB-01	Total Recoverable	Water	EPA 6020	308788
180-102787-10	BAW-8	Total Recoverable	Water	EPA 6020	308788
180-102787-11	BAW-9	Total Recoverable	Water	EPA 6020	308788
180-102787-12	DUP-02	Total Recoverable	Water	EPA 6020	308788
MB 180-308788/1-A	Method Blank	Total Recoverable	Water	EPA 6020	308788
LCS 180-308788/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	308788

Analysis Batch: 309151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-2	BAW-2A	Total Recoverable	Water	EPA 6020	308788
180-102787-3	BAW-3	Total Recoverable	Water	EPA 6020	308788
180-102787-4	BAW-4	Total Recoverable	Water	EPA 6020	308788
180-102787-5	BAW-5	Total Recoverable	Water	EPA 6020	308788
180-102787-6	BAW-7	Total Recoverable	Water	EPA 6020	308788
180-102787-7	DUP-01	Total Recoverable	Water	EPA 6020	308788
180-102787-8	FB-01	Total Recoverable	Water	EPA 6020	308788
180-102787-9	EB-01	Total Recoverable	Water	EPA 6020	308788
180-102787-10	BAW-8	Total Recoverable	Water	EPA 6020	308788
180-102787-11	BAW-9	Total Recoverable	Water	EPA 6020	308788
180-102787-12	DUP-02	Total Recoverable	Water	EPA 6020	308788
LCS 180-308788/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	308788

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

180-102787 Chain of Custody

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Philip Evans	Lab PM: Bortot, Veronica	COC No: 180-58577-10708.1
Client Contact: Rick Hagendorfer	Phone: 850-336-0192	E-Mail: veronica.bortot@testamericainc.com	Page: Page 1 of 2
Company: RDH Environmental Services Inc			Job #:
Address: 5720 Dove Drive	Due Date Requested:		
City: Pace	TAT Requested (days):		
State, Zip: FL, 32571			
Phone: 205-992-5417(Tel)	PO #: SCS10382606		
Email: rickhagendorfer@gmail.com	WO #:		
Project Name: CCR - Plant Daniel Ash Pond B CCR	Project #: 18020047		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC - Ra 226 & 228	6020, 7470A	300_ORGFM_28D - Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code				D	D	N		
[redacted] BAW-1	2/21/20	1010	G	Water			X	X	X		
BAW-2A	2/21/20	1112	G	Water			X	X	X		
BAW-3	2/21/20	1230	G	Water			X	X	X		
BAW-4	2/22/20	1010	G	Water			X	X	X		
BAW-5	2/22/20	0710	G	Water			X	X	X		
BAW-7	2/21/20	1700	G	Water			X	X	X		
Dup-01	2/21/20	0910	G	Water			X	X	X		
FB-01	2/21/20	1105	G	Water			X	X	X		
EB-01	2/22/20	0845	G	Water			X	X	X		
BAW-8	2/22/20	0805	G	Water			X	X	X		
BAW-9	2/22/20	0912	G	Water			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	2/22/20 1200	RDH	[signature]	2/22/20 1200	RDH
[signature]	2/24/20 1550	RDH	Matthew Jacks	2/25/2020 900	ETA PH

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Philip Evans	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-58577-10708.2
Client Contact: Rick Hagendorfer	Phone: 850-336-0192	E-Mail: veronica.bortot@testamericainc.com		Page: Page 2 of 2
Company: RDH Environmental Services Inc				Job #:

Address: 5720 Dove Drive	Due Date Requested:
City: Pace	TAT Requested (days):
State, Zip: FL, 32571	
Phone: 205-992-5417(Tel)	PO #: SCS10382606
Email: rickhagendorfer@gmail.com	WO #:
Project Name: CCR - Plant Daniel Ash Pond B CCR	Project #: 18020047
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC - Ra 226 & 228	6020, 7470A	300_ORGFM_28D - Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
DUP-02	2/22/20	0105	G	Water			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 2/22/20 1200	Company: RDH	Received by:	Date/Time: 2/22/20 1200	Company: RDH
Relinquished by:	Date/Time: 2/24/20 1550	Company: RDH	Received by: Matthew Jodis	Date/Time: 2/25/2020 900	Company: ETA PH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

180-102787 Waybill

Do Not Lift Using This Tag

ORIGIN ID:PNSA (850) 336-0192
RICK HAGENDORFER
RDH ENVIRONMENTAL
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 24FEB20
ACTWGT: 60.10 LB
CAD: 6992215/SSF02021
DIMS: 26x14x14 IN

BILL THIRD PARTY

TO VERONICA BARTOT
EURO FINS TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-2436 REF:
INV: PO: DEPT:

FedEx Express

1 of 6
TRK# 0201 3906 2365 9414
MASTER

TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT
AHS
15238
PIT
PA-US

XH AGCA

Uncorrected temp 1.4 °C
Thermometer ID 10
CF 0 Initials JJ

PT-WI-SR-001 effective 11/8/18

Do Not Lift Using This Tag

ORIGIN ID:PNSA (850) 336-0192
RICK HAGENDORFER
RDH ENVIRONMENTAL
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 24FEB20
ACTWGT: 59.70 LB
CAD: 6992215/SSF02021
DIMS: 25x14x14 IN

BILL THIRD PARTY

TO VERONICA BARTOT
EURO FINS TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-2436 REF:
INV: PO: DEPT:

FedEx Express

5 of 6
MPS# 0263 3906 2365 9458
Mstr# 3906 2365 9414 0201

TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT
AHS
15238
PIT
PA-US

XH AGCA

Uncorrected temp 1.7 °C
Thermometer ID 10
CF 0 Initials JJ

PT-WI-SR-001 effective 11/8/18

3/16/2020


IN ID:PNSA (850) 336-0192
HAGENDORFER
ENVIRONMENTAL
DOVE DR
ION, FL 32571
STATES US
SHIP DATE: 24FEB20
ACTWGT: 50.40 LB
CAD: 6992215/SSF02021
DIMS: 23x14x14 IN
BILL THIRD PARTY
VERONICA BARTOT
EURO FINS TEST AMERICA
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-2435
REF:
INV:
PO:
DEPT:
FedEx
Express
4 of 6
MPS# 0263 3906 2365 9447
Mstr# 3906 2365 9414
0201
XH AGCA
TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT
AHS
15238
PA-US PIT
97
1
10:30 A
9447
02.25
Uncorrected temp
Thermometer ID
CF 0
Initials
PT-WI-SR-001 effective 11/8/18

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-102787-1

Login Number: 102787
List Number: 1
Creator: Jodis, Matthew V

List Source: Eurofins TestAmerica, Pittsburgh

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	
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	

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-102787-2
Client Project/Site: CCR - Plant Daniel - Ash Pond B

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty

Veronica Bortot

Authorized for release by:
3/25/2020 8:23:12 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@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

Job ID: 180-102787-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-102787-2

Comments
No additional comments.

Receipt
The samples were received on 2/25/2020 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.4º C, 1.7º C and 4.4º C.

RAD
Methods 903.0, 9315: Ra-228 Prep Batch 160-462339
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

BAW-1 (180-102787-1), BAW-2A (180-102787-2), BAW-3 (180-102787-3), BAW-4 (180-102787-4), BAW-5 (180-102787-5), BAW-7 (180-102787-6), DUP-01 (180-102787-7), FB-01 (180-102787-8), EB-01 (180-102787-9), BAW-8 (180-102787-10), BAW-9 (180-102787-11), (LCS 160-462339/1-A), (MB 160-462339/22-A), (500-178351-L-12-A) and (500-178351-J-12-A DU)

Method 9315: Ra-228 Prep Batch 160-462339
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

DUP-02 (180-102787-12)

Methods 904.0, 9320: Ra-228 Prep Batch 160-462342
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

BAW-1 (180-102787-1), BAW-2A (180-102787-2), BAW-3 (180-102787-3), BAW-4 (180-102787-4), BAW-5 (180-102787-5), BAW-7 (180-102787-6), DUP-01 (180-102787-7), FB-01 (180-102787-8), EB-01 (180-102787-9), BAW-8 (180-102787-10), BAW-9 (180-102787-11), DUP-02 (180-102787-12), (LCS 160-462342/1-A), (MB 160-462342/22-A), (500-178351-L-12-B) and (500-178351-J-12-B DU)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Job ID: 180-102787-2
Project/Site: CCR - Plant Daniel - Ash Pond B

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)

Accreditation/Certification Summary

Client: Southern Company
Job ID: 180-102787-2
Project/Site: CCR - Plant Daniel - Ash Pond B

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

Accreditation/Certification Summary

Client: Southern Company
Job ID: 180-102787-2
Project/Site: CCR - Plant Daniel - Ash Pond B

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20 *
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-102787-1	BAW-1	Water	02/21/20 10:10	02/25/20 09:00	
180-102787-2	BAW-2A	Water	02/21/20 11:12	02/25/20 09:00	
180-102787-3	BAW-3	Water	02/21/20 12:30	02/25/20 09:00	
180-102787-4	BAW-4	Water	02/22/20 10:10	02/25/20 09:00	
180-102787-5	BAW-5	Water	02/22/20 07:10	02/25/20 09:00	
180-102787-6	BAW-7	Water	02/21/20 17:00	02/25/20 09:00	
180-102787-7	DUP-01	Water	02/21/20 09:10	02/25/20 09:00	
180-102787-8	FB-01	Water	02/21/20 11:05	02/25/20 09:00	
180-102787-9	EB-01	Water	02/22/20 08:45	02/25/20 09:00	
180-102787-10	BAW-8	Water	02/22/20 08:05	02/25/20 09:00	
180-102787-11	BAW-9	Water	02/22/20 09:12	02/25/20 09:00	
180-102787-12	DUP-02	Water	02/22/20 07:05	02/25/20 09:00	

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

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

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

Client Sample ID: BAW-1
Date Collected: 02/21/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.18 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:23	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.18 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464837	03/18/20 18:39	CJQ	TAL SL
	Instrument ID: GFPCPROTEAN									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-2A
Date Collected: 02/21/20 11:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.13 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:23	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.13 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464837	03/18/20 18:39	CJQ	TAL SL
	Instrument ID: GFPCPROTEAN									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-3
Date Collected: 02/21/20 12:30
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.60 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:23	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.60 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464837	03/18/20 18:39	CJQ	TAL SL
	Instrument ID: GFPCPROTEAN									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-4
Date Collected: 02/22/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.50 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

Client Sample ID: BAW-4
Date Collected: 02/22/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.50 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:48	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-5
Date Collected: 02/22/20 07:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.62 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.62 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:48	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-7
Date Collected: 02/21/20 17:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.71 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.71 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:49	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01
Date Collected: 02/21/20 09:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.11 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.11 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:49	CJQ	TAL SL
	Instrument ID: GFPCBLUE									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

Client Sample ID: DUP-01
Date Collected: 02/21/20 09:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-7
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	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL

Client Sample ID: FB-01
Date Collected: 02/21/20 11:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.82 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.82 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:49	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: EB-01
Date Collected: 02/22/20 08:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.30 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.30 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:49	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-8
Date Collected: 02/22/20 08:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.69 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.69 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:50	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

Client Sample ID: BAW-9

Date Collected: 02/22/20 09:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.53 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1			465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.53 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:50	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 07:37	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-02

Date Collected: 02/22/20 07:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.10 mL	1.0 g	462339	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	465272	03/23/20 05:24	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.10 mL	1.0 g	462342	02/28/20 12:42	HET	TAL SL
Total/NA	Analysis	9320		1			464847	03/18/20 18:50	CJQ	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			465338	03/24/20 08:11	SMP	TAL SL
	Instrument ID: NOEQUIP									

Laboratory References:

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

Analyst References:

Lab: TAL SL

Batch Type: Prep

HET = Hailey Thompson

Batch Type: Analysis

CJQ = Caleb Quinn

SMP = Siobhan Perry

Client Sample ID: BAW-1

Date Collected: 02/21/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-1
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	0.0726	U	0.0770	0.0772	1.00	0.123	pCi/L	02/28/20 12:42	03/23/20 05:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.196	U	0.214	0.215	1.00	0.351	pCi/L	02/28/20 12:42	03/18/20 18:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:39*	*1*
Y Carrier	*91.6*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:39*	*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	0.268	U	0.227	0.228	5.00	0.351	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-2A

Date Collected: 02/21/20 11:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-2
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	0.129	U	0.0963	0.0970	1.00	0.141	pCi/L	02/28/20 12:42	03/23/20 05:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.221	0.221	1.00	0.378	pCi/L	02/28/20 12:42	03/18/20 18:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:39*	*1*
Y Carrier	*90.1*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:39*	*1*

Client Sample ID: BAW-2A
Date Collected: 02/21/20 11:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-2
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	0.230	U	0.241	0.241	5.00	0.378	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-3
Date Collected: 02/21/20 12:30
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-3
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	0.0600	U	0.0769	0.0771	1.00	0.128	pCi/L	02/28/20 12:42	03/23/20 05:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0659	U	0.217	0.218	1.00	0.377	pCi/L	02/28/20 12:42	03/18/20 18:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:39*	*1*
Y Carrier	*91.2*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:39*	*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	0.126	U	0.230	0.231	5.00	0.377	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-4
Date Collected: 02/22/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-4
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	0.0818	U	0.0859	0.0862	1.00	0.137	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Client Sample ID: BAW-4

Date Collected: 02/22/20 10:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-4

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.448		0.226	0.230	1.00	0.327	pCi/L	02/28/20 12:42	03/18/20 18:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:48*	*1*
Y Carrier	*90.1*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:48*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.530		0.242	0.246	5.00	0.327	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-5

Date Collected: 02/22/20 07:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-5

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	0.213		0.0982	0.100	1.00	0.111	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.257	U	0.220	0.222	1.00	0.352	pCi/L	02/28/20 12:42	03/18/20 18:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:48*	*1*
Y Carrier	*90.8*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:48*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.470		0.241	0.243	5.00	0.352	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-7

Date Collected: 02/21/20 17:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-6
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	0.0532	U	0.0731	0.0733	1.00	0.123	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.321	U	0.239	0.240	1.00	0.373	pCi/L	02/28/20 12:42	03/18/20 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*1*
Y Carrier	*89.7*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*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	**0.375**		0.250	0.251	5.00	0.373	pCi/L		03/24/20 07:37	1

Client Sample ID: DUP-01

Date Collected: 02/21/20 09:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-7
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	0.157	U	0.115	0.116	1.00	0.168	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.4*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0196	U	0.203	0.203	1.00	0.371	pCi/L	02/28/20 12:42	03/18/20 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.4*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*1*
Y Carrier	*90.5*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*1*

Client Sample ID: DUP-01

Date Collected: 02/21/20 09:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-7
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.137	U	0.233	0.234	5.00	0.371	pCi/L		03/24/20 07:37	1

Client Sample ID: FB-01

Date Collected: 02/21/20 11:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-8
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	-0.0229	U	0.0529	0.0530	1.00	0.125	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.103	U	0.210	0.210	1.00	0.396	pCi/L	02/28/20 12:42	03/18/20 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*1*
Y Carrier	*90.5*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*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	-0.126	U	0.217	0.217	5.00	0.396	pCi/L		03/24/20 07:37	1

Client Sample ID: EB-01

Date Collected: 02/22/20 08:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-9
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	-0.0340	U	0.0724	0.0725	1.00	0.161	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.9*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Client Sample ID: EB-01

Date Collected: 02/22/20 08:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-9

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.352		0.224	0.226	1.00	0.340	pCi/L	02/28/20 12:42	03/18/20 18:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.9*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*1*
Y Carrier	*89.0*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:49*	*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	0.318	U	0.235	0.237	5.00	0.340	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-8

Date Collected: 02/22/20 08:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-10

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	0.0744	U	0.0856	0.0859	1.00	0.139	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.377		0.230	0.233	1.00	0.348	pCi/L	02/28/20 12:42	03/18/20 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:50*	*1*
Y Carrier	*87.9*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:50*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.452		0.245	0.248	5.00	0.348	pCi/L		03/24/20 07:37	1

Client Sample ID: BAW-9

Date Collected: 02/22/20 09:12
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-11
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	0.116	U	0.0986	0.0991	1.00	0.150	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.206	U	0.201	0.201	1.00	0.324	pCi/L	02/28/20 12:42	03/18/20 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:50*	*1*
Y Carrier	*90.1*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:50*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.322	U	0.224	0.224	5.00	0.324	pCi/L		03/24/20 07:37	1

Client Sample ID: DUP-02

Date Collected: 02/22/20 07:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-12
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	0.0816	U	0.0842	0.0845	1.00	0.133	pCi/L	02/28/20 12:42	03/23/20 05:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*02/28/20 12:42*	*03/23/20 05:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.377		0.237	0.239	1.00	0.363	pCi/L	02/28/20 12:42	03/18/20 18:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:50*	*1*
Y Carrier	*90.1*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:50*	*1*

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Daniel - Ash Pond B

Job ID: 180-102787-2

Client Sample ID: DUP-02
Date Collected: 02/22/20 07:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102787-12
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	0.458		0.252	0.253	5.00	0.363	pCi/L		03/24/20 08:11	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-462339/22-A
Matrix: Water
Analysis Batch: 465272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 462339

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04815	U	0.0662	0.0663	1.00	0.112	pCi/L	02/28/20 12:42	03/23/20 07:34	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*02/28/20 12:42*	*03/23/20 07:34*	*1*

Lab Sample ID: LCS 160-462339/1-A
Matrix: Water
Analysis Batch: 465272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 462339

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	9.822		1.06	1.00	0.143	pCi/L	87	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*100*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-462342/22-A
Matrix: Water
Analysis Batch: 464847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 462342

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1954	U	0.205	0.206	1.00	0.334	pCi/L	02/28/20 12:42	03/18/20 18:52	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:52*	*1*
Y Carrier	*90.5*		*40 - 110*	*02/28/20 12:42*	*03/18/20 18:52*	*1*

Lab Sample ID: LCS 160-462342/1-A
Matrix: Water
Analysis Batch: 464837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 462342

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.01	7.056		0.873	1.00	0.388	pCi/L	78	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*100*		*40 - 110*
Y Carrier	*91.2*		*40 - 110*

Rad

Prep Batch: 462339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total/NA	Water	PrecSep-21	
180-102787-2	BAW-2A	Total/NA	Water	PrecSep-21	
180-102787-3	BAW-3	Total/NA	Water	PrecSep-21	
180-102787-4	BAW-4	Total/NA	Water	PrecSep-21	
180-102787-5	BAW-5	Total/NA	Water	PrecSep-21	
180-102787-6	BAW-7	Total/NA	Water	PrecSep-21	
180-102787-7	DUP-01	Total/NA	Water	PrecSep-21	
180-102787-8	FB-01	Total/NA	Water	PrecSep-21	
180-102787-9	EB-01	Total/NA	Water	PrecSep-21	
180-102787-10	BAW-8	Total/NA	Water	PrecSep-21	
180-102787-11	BAW-9	Total/NA	Water	PrecSep-21	
180-102787-12	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-462339/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-462339/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 462342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102787-1	BAW-1	Total/NA	Water	PrecSep_0	
180-102787-2	BAW-2A	Total/NA	Water	PrecSep_0	
180-102787-3	BAW-3	Total/NA	Water	PrecSep_0	
180-102787-4	BAW-4	Total/NA	Water	PrecSep_0	
180-102787-5	BAW-5	Total/NA	Water	PrecSep_0	
180-102787-6	BAW-7	Total/NA	Water	PrecSep_0	
180-102787-7	DUP-01	Total/NA	Water	PrecSep_0	
180-102787-8	FB-01	Total/NA	Water	PrecSep_0	
180-102787-9	EB-01	Total/NA	Water	PrecSep_0	
180-102787-10	BAW-8	Total/NA	Water	PrecSep_0	
180-102787-11	BAW-9	Total/NA	Water	PrecSep_0	
180-102787-12	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-462342/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-462342/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

180-102787 Chain of Custody

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Philip Evans	Lab PM: Bortot, Veronica	COC No: 180-58577-10708.1
Client Contact: Rick Hagendorfer	Phone: 850-336-0192	E-Mail: veronica.bortot@testamericainc.com	Page: Page 1 of 2
Company: RDH Environmental Services Inc			Job #:
Address: 5720 Dove Drive	Due Date Requested:		
City: Pace	TAT Requested (days):		
State, Zip: FL, 32571			
Phone: 205-992-5417(Tel)	PO #: SCS10382606		
Email: rickhagendorfer@gmail.com	WO #:		
Project Name: CCR - Plant Daniel Ash Pond B CCR	Project #: 18020047		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC - Ra 226 & 228	6020, 7470A	300_ORGFM_28D - Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code				D	D	N		
[redacted] BAW-1	2/21/20	1010	G	Water			X	X	X		
BAW-2A	2/21/20	1112	G	Water			X	X	X		
BAW-3	2/21/20	1230	G	Water			X	X	X		
BAW-4	2/22/20	1010	G	Water			X	X	X		
BAW-5	2/22/20	0710	G	Water			X	X	X		
BAW-7	2/21/20	1700	G	Water			X	X	X		
Dup-01	2/21/20	0910	G	Water			X	X	X		
FB-01	2/21/20	1105	G	Water			X	X	X		
EB-01	2/22/20	0845	G	Water			X	X	X		
BAW-8	2/22/20	0805	G	Water			X	X	X		
BAW-9	2/22/20	0912	G	Water			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	2/22/20 1200	RDH		2/22/20 1200	RDH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	2/24/20 1550	RDH	Matthew Jodis	2/25/2020 900	ETA PH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Philip Evans	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-58577-10708.2
Client Contact: Rick Hagendorfer	Phone: 850-336-0192	E-Mail: veronica.bortot@testamericainc.com		Page: Page 2 of 2
Company: RDH Environmental Services Inc				Job #:

Address: 5720 Dove Drive	Due Date Requested:
City: Pace	TAT Requested (days):
State, Zip: FL, 32571	
Phone: 205-992-5417(Tel)	PO #: SCS10382606
Email: rickhagendorfer@gmail.com	WO #:
Project Name: CCR - Plant Daniel Ash Pond B CCR	Project #: 18020047
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC - Ra 226 & 228	6020, 7470A	300_ORGFM_28D - Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
DUP-02	2/22/20	0105	G	Water			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 2/22/20 1200	Company: RDH	Received by:	Date/Time: 2/22/20 1200	Company: RDH
Relinquished by:	Date/Time: 2/24/20 1550	Company: RDH	Received by: Matthew Jodis	Date/Time: 2/25/2020 900	Company: ETA PH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Do Not Lift Using This Tag

ORIGIN ID:PNSA (850) 336-0192
RICK HAGENDORFER
RDH ENVIRONMENTAL
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 24FEB20
ACTWGT: 60.10 LB
CAD: 6992215/SSF02021
DIMS: 26x14x14 IN

BILL THIRD PARTY

TO VERONICA BARTOT
EURO FINS TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-2436 REF:
INV: PO: DEPT:

FedEx Express

1 of 6
TRK# 0201 3906 2365 9414
MASTER
XH AGCA

TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT
AHS
15238
PA-US PIT

Uncorrected temp 1.4 °C
Thermometer ID 10
CF 0 Initials JJ

PT-WI-SR-001 effective 11/8/18

Do Not Lift Using This Tag

ORIGIN ID:PNSA (850) 336-0192
RICK HAGENDORFER
RDH ENVIRONMENTAL
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 24FEB20
ACTWGT: 59.70 LB
CAD: 6992215/SSF02021
DIMS: 25x14x14 IN

BILL THIRD PARTY

TO VERONICA BARTOT
EURO FINS TEST AMERICA
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-2436 REF:
INV: PO: DEPT:

FedEx Express

5 of 6
MPS# 0263 3906 2365 9458
Mstr# 3906 2365 9414 0201
XH AGCA

TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT
AHS
15238
PA-US PIT

Uncorrected temp 1.7 °C
Thermometer ID 10
CF 0 Initials JJ

PT-WI-SR-001 effective 11/8/18


FROM IN ID:PNSA (850) 336-0192
HAGENDORFER
ENVIRONMENTAL
DOVE DR
ION, FL 32571
STATES US
SHIP DATE: 24FEB20
ACTWGT: 50.40 LB
CAD: 6992215/SSF02021
DIMS: 23x14x14 IN
BILL THIRD PARTY
TO VERONICA BARTOT
EURO FINS TEST AMERICA
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-2435
INV:
PO:
REF:
DEPT:
FedEx
Express
4 of 6
MPS# 0263 3906 2365 9447
Mstr# 3906 2365 9414
0201
XH AGCA
TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT
AHS
15238
PA-US PIT
Uncorrected temp
Thermometer ID
CF 0
Initials
PT-WI-SR-001 effective 11/8/18
97
1
10:30
A
9447
02.25
SKAGE CONFORMI

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-386155.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: veronica.bortot@testamericainc.com	State of Origin: Florida	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-102787-2
Address: 13715 Rider Trail North,	Due Date Requested: 3/19/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR - Plant Daniel - Ash Pond B	Project #: 18020047			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 (MOD) Copy Analytes	Ra226Ra228_GFPC	9320_Ra228/PrecSep_0 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAW-1 (180-102787-1)	2/21/20	10:10 Eastern		Water			X	X	X	1	
BAW-2A (180-102787-2)	2/21/20	11:12 Eastern		Water			X	X	X	1	
BAW-3 (180-102787-3)	2/21/20	12:30 Eastern		Water			X	X	X	1	
BAW-4 (180-102787-4)	2/22/20	10:10 Eastern		Water			X	X	X	1	
BAW-5 (180-102787-5)	2/22/20	07:10 Eastern		Water			X	X	X	1	
BAW-7 (180-102787-6)	2/21/20	17:00 Eastern		Water			X	X	X	1	
DUP-01 (180-102787-7)	2/21/20	09:10 Eastern		Water			X	X	X	1	
FB-01 (180-102787-8)	2/21/20	11:05 Eastern		Water			X	X	X	1	
EB-01 (180-102787-9)	2/22/20	08:45 Eastern		Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	2/26/20 1700			2-29-20 08:55	ETA SR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-386155.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: veronica.bortot@testamericainc.com	State of Origin: Florida	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-102787-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 3/19/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR - Plant Daniel - Ash Pond B	Project #: 18020047			
Site:	SSOW#:			

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 (MOD) Copy Analytes	Ra226/Ra228_GFPC	9320_Ra226/PrecSep_0 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAW-8 (180-102787-10)	2/22/20	08:05 Eastern		Water			X	X	X	1	
BAW-9 (180-102787-11)	2/22/20	09:12 Eastern		Water			X	X	X	1	
DUP-02 (180-102787-12)	2/22/20	07:05 Eastern		Water				X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the labo

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by:	Date/Time: 2/26/20 1710	Company: ETA	Received by: MH	Date/Time: 2-27-20 08:55	Company: ETA SR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-102787-2

Login Number: 102787
List Number: 1
Creator: Jodis, Matthew V

List Source: Eurofins TestAmerica, Pittsburgh

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	
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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-102787-2

Login Number: 102787
List Number: 2
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 02/27/20 11:07 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	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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Product Name: Low-Flow System

Date: 2020-02-21 10:10:37

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	67 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	58.1 ft

Well Information:		Pumping Information:	
Well ID	BAW-1	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7790493 L
Well Total Depth	60.6 ft	Calculated Sample Rate	300 sec
Screen Length	5 ft	Stabilization Drawdown	0.72 in
Depth to Water	22.92 ft	Total Volume Pumped	20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:43:26	1505.02	19.41	4.94	30.31	0.53	22.98	5.09	70.48
Last 5	09:53:27	2106.02	23.19	4.90	30.25	0.55	22.98	5.11	79.30
Last 5	09:58:27	2406.03	23.34	4.84	29.81	0.52	22.98	5.09	81.85
Last 5	10:03:28	2707.02	23.44	4.86	29.81	0.47	22.98	5.10	84.20
Last 5	10:08:30	3009.03	23.51	4.86	29.74	0.60	22.98	5.08	84.13
Variance 0			0.15	-0.05	-0.44			-0.02	2.54
Variance 1			0.09	0.02	0.00			0.01	2.35
Variance 2			0.08	-0.00	-0.07			-0.02	-0.06

Notes

Sample time @ 1010. Sunny 45. DUP-01@ fake time 0910.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-21 11:11:57

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	62.2 ft

Well Information:		Pumping Information:	
Well ID	BAW-2A	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7924396 L
Well Total Depth	67.2 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	32.26 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:48:51	300.03	21.91	4.76	40.11	2.09	32.26	2.90	87.61
Last 5	10:53:51	600.03	22.05	4.70	39.97	1.68	32.26	2.72	87.00
Last 5	10:58:51	900.02	22.41	4.70	39.83	1.23	32.26	2.72	87.55
Last 5	11:03:51	1200.03	22.49	4.72	39.37	1.00	32.26	2.71	87.23
Last 5	11:08:51	1500.03	22.44	4.73	39.42	0.73	32.26	2.74	86.76
Variance 0			0.35	0.01	-0.14			0.00	0.55
Variance 1			0.08	0.01	-0.46			-0.01	-0.31
Variance 2			-0.05	0.01	0.06			0.03	-0.47

Notes

Sample time @ 1112. Sunny 50. FB-01@ 1105.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-21 12:30:06

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	63.4 ft

Well Information:		Pumping Information:	
Well ID	BAW-3	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7924396 L
Well Total Depth	68.4 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	31.87 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:06:45	2101.03	22.94	4.54	41.06	1.22	31.90	0.23	80.86
Last 5	12:11:46	2402.03	22.67	4.55	41.02	1.13	31.90	0.24	79.31
Last 5	12:16:46	2702.03	23.07	4.54	41.01	1.02	31.90	0.23	78.10
Last 5	12:21:46	3002.03	22.93	4.54	41.01	0.92	31.90	0.23	76.86
Last 5	12:26:46	3302.03	23.07	4.55	41.06	0.83	31.90	0.23	75.93
Variance 0			0.40	-0.01	-0.02			-0.00	-1.21
Variance 1			-0.14	0.00	0.01			-0.00	-1.23
Variance 2			0.14	0.01	0.04			0.00	-0.93

Notes

Sample time@ 1230. Sunny 50.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-21 16:57:48

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	65 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	58.5 ft

Well Information:		Pumping Information:	
Well ID	BAW-7	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7701225 L
Well Total Depth	63.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	26.32 ft	Total Volume Pumped	92 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:36:14	12628.03	22.65	4.71	28.40	4.86	26.35	4.22	89.94
Last 5	16:41:14	12928.03	22.65	4.81	28.30	4.83	26.35	4.20	84.93
Last 5	16:46:14	13228.03	22.58	4.81	28.38	4.93	26.35	4.19	84.65
Last 5	16:51:32	13546.03	22.57	4.80	28.32	4.90	26.35	4.22	84.75
Last 5	16:56:32	13846.03	22.56	4.80	28.39	4.87	26.35	4.21	84.50
Variance 0			-0.07	-0.00	0.08			-0.01	-0.29
Variance 1			-0.01	-0.01	-0.06			0.03	0.11
Variance 2			-0.01	0.00	0.07			-0.01	-0.25

Notes

Sample time @ 1700. Sunny 50.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-22 07:07:25

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	72 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	64.1 ft

Well Information:		Pumping Information:	
Well ID	BAW-5	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.8013664 L
Well Total Depth	69.1 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	32.72 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:44:41	300.03	20.93	6.03	133.00	0.86	32.75	0.29	-80.21
Last 5	06:49:41	600.03	21.47	6.06	128.01	0.70	32.75	0.16	-118.20
Last 5	06:54:41	900.03	21.57	6.11	125.88	0.72	32.75	0.16	-120.14
Last 5	06:59:41	1200.03	21.64	6.12	125.42	0.70	32.75	0.17	-118.95
Last 5	07:04:41	1500.03	21.72	6.13	125.27	0.65	32.75	0.17	-115.62
Variance 0			0.10	0.05	-2.13			-0.00	-1.94
Variance 1			0.07	0.01	-0.46			0.01	1.19
Variance 2			0.07	0.01	-0.15			0.00	3.33

Notes

Sample time@ 0710. Sunny 35.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-22 08:05:06

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	63.7 ft

Well Information:		Pumping Information:	
Well ID	BAW-8	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5324396 L
Well Total Depth	68.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.44 in
Depth to Water	32.64 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:42:44	600.03	20.95	5.90	98.29	0.61	33.01	0.23	-85.45
Last 5	07:47:44	900.03	21.11	5.90	98.64	0.80	33.01	0.20	-93.08
Last 5	07:52:44	1200.03	21.38	5.90	98.39	1.31	33.01	0.16	-94.90
Last 5	07:57:47	1503.03	21.39	5.90	98.37	1.16	33.01	0.14	-95.04
Last 5	08:02:47	1803.03	21.20	5.90	98.29	1.10	33.01	0.13	-94.27
Variance 0			0.28	-0.00	-0.25			-0.04	-1.82
Variance 1			0.00	-0.00	-0.02			-0.02	-0.14
Variance 2			-0.18	0.00	-0.08			-0.01	0.77

Notes

Sample time @ 0805. Sunny 40. DUP-02@ fake time 0705.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-22 09:12:56

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	58.15 ft

Well Information:		Pumping Information:	
Well ID	BAW-9	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5324396 L
Well Total Depth	63.15 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	31.97 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:55:25	300.03	21.82	5.71	80.79	1.01	32.02	0.48	-66.87
Last 5	09:00:25	600.03	22.09	5.73	82.88	1.32	32.02	0.34	-76.28
Last 5	09:05:25	900.03	22.04	5.75	83.62	1.50	32.02	0.27	-79.68
Last 5	09:10:26	1201.03	22.02	5.76	84.08	1.78	32.02	0.24	-81.22
Last 5									
Variance 0			0.26	0.02	2.09			-0.14	-9.41
Variance 1			-0.05	0.02	0.74			-0.07	-3.39
Variance 2			-0.02	0.01	0.46			-0.04	-1.55

Notes

Sample time @ 0912. Sunny 42. EB-01@ 0845.

Grab Samples

Product Name: Low-Flow System

Date: 2020-02-22 10:03:56

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	75 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	64.9 ft

Well Information:		Pumping Information:	
Well ID	BAW-4	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.8147567 L
Well Total Depth	69.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	29.34 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:42:45	600.03	23.34	5.36	52.42	2.25	29.37	0.15	-14.70
Last 5	09:47:45	900.04	23.28	5.35	51.92	1.80	29.37	0.16	-18.96
Last 5	09:52:45	1200.04	23.39	5.33	51.50	1.56	29.37	0.17	-22.00
Last 5	09:57:45	1500.03	23.37	5.31	51.25	1.41	29.37	0.19	-24.20
Last 5	10:02:46	1801.04	23.35	5.30	50.81	1.54	29.37	0.20	-27.97
Variance 0			0.10	-0.02	-0.41			0.01	-3.04
Variance 1			-0.02	-0.01	-0.25			0.02	-2.21
Variance 2			-0.01	-0.01	-0.44			0.01	-3.76

Notes

Sample time @ 1010. Sunny 55.

Grab Samples

1st
Semi-Annual
Monitoring Event

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-104636-1
Client Project/Site: CCR - Plant Daniel Ash Pond

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty

Authorized for release by:
5/4/2020 8:49:44 PM
Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

Designee for

Shali Brown, Project Manager II
(615)301-5031
shali.brown@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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

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

PA Lab ID: 02-00416

Table of Contents

Case Narrative

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

Job ID: 180-104636-1

Job ID: 180-104636-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-104636-1

Comments
No additional comments.

Receipt
The samples were received on 4/15/2020 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2º C, 1.6º C, 1.8º C and 1.9º 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 Daniel Ash Pond

Job ID: 180-104636-1

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.
¤	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
Job ID: 180-104636-1
Project/Site: CCR - Plant Daniel Ash Pond

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

Sample Summary

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

Job ID: 180-104636-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-104636-1	BAW-1	Water	04/14/20 08:47	04/15/20 10:15	
180-104636-2	BAW-2A	Water	04/14/20 10:34	04/15/20 10:15	
180-104636-3	BAW-3	Water	04/14/20 11:42	04/15/20 10:15	
180-104636-4	BAW-4	Water	04/14/20 11:30	04/15/20 10:15	
180-104636-5	BAW-5	Water	04/14/20 08:40	04/15/20 10:15	
180-104636-6	BAW-7	Water	04/14/20 09:46	04/15/20 10:15	
180-104636-7	BAW-8	Water	04/14/20 09:40	04/15/20 10:15	
180-104636-8	BAW-9	Water	04/14/20 10:45	04/15/20 10:15	
180-104636-9	DUP-02	Water	04/14/20 09:34	04/15/20 10:15	
180-104636-10	FB-02	Water	04/14/20 09:30	04/15/20 10:15	
180-104636-11	EB-02	Water	04/14/20 09:10	04/15/20 10:15	

Method Summary

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

Job ID: 180-104636-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020B	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:

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 = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

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

Job ID: 180-104636-1

Client Sample ID: BAW-1
Date Collected: 04/14/20 08:47
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-1
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 9056A		1			313835	04/26/20 01:43	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:19	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 13:57	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313059	04/16/20 09:57	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-2A
Date Collected: 04/14/20 10:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-2
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 9056A		1			313835	04/26/20 01:59	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:23	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:00	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313059	04/16/20 09:57	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-3
Date Collected: 04/14/20 11:42
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-3
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 9056A		1			313835	04/26/20 02:14	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:26	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:02	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313059	04/16/20 09:57	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

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

Job ID: 180-104636-1

Client Sample ID: BAW-4

Date Collected: 04/14/20 11:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-4

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 9056A		1			313835	04/26/20 02:29	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:30	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:05	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-5

Date Collected: 04/14/20 08:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-5

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 9056A		1			313835	04/26/20 02:45	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:33	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:07	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-7

Date Collected: 04/14/20 09:46
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-6

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 9056A		1			313835	04/26/20 03:00	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:37	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:09	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

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

Job ID: 180-104636-1

Client Sample ID: BAW-8
Date Collected: 04/14/20 09:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-7
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 9056A		1			313835	04/26/20 03:15	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:47	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:12	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-9
Date Collected: 04/14/20 10:45
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-8
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 9056A		1			313835	04/26/20 03:30	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:51	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:14	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-02
Date Collected: 04/14/20 09:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-9
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 9056A		1			313835	04/26/20 03:46	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:54	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:17	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

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

Job ID: 180-104636-1

Client Sample ID: FB-02

Date Collected: 04/14/20 09:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-10

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 9056A		1			313835	04/26/20 04:01	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 18:58	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:24	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: EB-02

Date Collected: 04/14/20 09:10
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-11

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 9056A		1			313835	04/26/20 04:47	SAC	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			314348	04/30/20 19:01	RSK	TAL PIT
	Instrument ID: A									
Total Recoverable	Prep	3005A			50 mL	50 mL	313149	04/17/20 09:01	KEM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			313842	04/24/20 14:26	RSK	TAL PIT
	Instrument ID: NEMO									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	313060	04/16/20 10:22	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KEM = Kimberly Mahoney

Batch Type: Analysis

AVS = Abbey Smith
RSK = Robert Kurtz
SAC = Shawn Clemente

Client Sample ID: BAW-1

Date Collected: 04/14/20 08:47
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-1

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.91**		1.00	0.320	mg/L			04/26/20 01:43	1
Fluoride	**0.0532**	**J**	0.100	0.0263	mg/L			04/26/20 01:43	1
Sulfate	**0.928**	**J**	1.00	0.380	mg/L			04/26/20 01:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 13:57	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 13:57	1
Barium	**0.0345**		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 13:57	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 13:57	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 13:57	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:19	1
Calcium	**0.887**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 13:57	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 13:57	1
Cobalt	**0.000853**	**J**	0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 13:57	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 13:57	1
Lithium	**0.00505**		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**25.0**		10.0	10.0	mg/L			04/16/20 09:57	1

Client Sample ID: BAW-2A

Date Collected: 04/14/20 10:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-2

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.57**		1.00	0.320	mg/L			04/26/20 01:59	1
Fluoride	**0.0537**	**J**	0.100	0.0263	mg/L			04/26/20 01:59	1
Sulfate	**2.71**		1.00	0.380	mg/L			04/26/20 01:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:00	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:00	1
Barium	**0.0394**		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:00	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:00	1
Boron	**0.0424**	**J**	0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:00	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:23	1
Calcium	**0.670**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:00	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:00	1
Cobalt	**0.000899**	**J**	0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:00	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:00	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**38.0**		10.0	10.0	mg/L			04/16/20 09:57	1

Client Sample ID: BAW-3

Date Collected: 04/14/20 11:42
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-3

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.75**		1.00	0.320	mg/L			04/26/20 02:14	1
Fluoride	**0.0340**	**J**	0.100	0.0263	mg/L			04/26/20 02:14	1
Sulfate	**1.62**		1.00	0.380	mg/L			04/26/20 02:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:02	1
Cadmium	**0.00107**	**J**	0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:02	1
Barium	**0.0335**		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:02	1
Lead	**0.000236**	**J B**	0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:02	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:02	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:26	1
Calcium	**0.811**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:02	1
Thallium	**0.000158**	**J**	0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:02	1
Cobalt	**0.00633**		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:02	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:02	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**31.0**		10.0	10.0	mg/L			04/16/20 09:57	1

Client Sample ID: BAW-4

Date Collected: 04/14/20 11:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-4

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.93**		1.00	0.320	mg/L			04/26/20 02:29	1
Fluoride	**0.0508**	**J**	0.100	0.0263	mg/L			04/26/20 02:29	1
Sulfate	**2.99**		1.00	0.380	mg/L			04/26/20 02:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.000896**	**J**	0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:05	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:05	1
Barium	**0.00949**	**J**	0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:05	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:05	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:05	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:30	1
Calcium	**2.95**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:05	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:05	1
Cobalt	**0.00105**	**J**	0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:05	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:05	1
Lithium	**0.0224**		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**30.0**		10.0	10.0	mg/L			04/16/20 10:22	1

Client Sample ID: BAW-5

Date Collected: 04/14/20 08:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-5

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.71**		1.00	0.320	mg/L			04/26/20 02:45	1
Fluoride	**0.0590**	**J**	0.100	0.0263	mg/L			04/26/20 02:45	1
Sulfate	**4.20**		1.00	0.380	mg/L			04/26/20 02:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00177**		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:07	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:07	1
Barium	**0.0452**		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:07	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:07	1
Boron	**0.209**		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:07	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:33	1
Calcium	**15.7**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:07	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:07	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:07	1
Molybdenum	**0.000747**	**J**	0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:07	1
Lithium	**0.192**		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**77.0**		10.0	10.0	mg/L			04/16/20 10:22	1

Client Sample ID: BAW-7

Date Collected: 04/14/20 09:46
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-6

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.68**		1.00	0.320	mg/L			04/26/20 03:00	1
Fluoride	**0.0415**	**J**	0.100	0.0263	mg/L			04/26/20 03:00	1
Sulfate	**1.18**		1.00	0.380	mg/L			04/26/20 03:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:09	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:09	1
Barium	**0.0124**		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:09	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:09	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:09	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:37	1
Calcium	**0.532**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:09	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:09	1
Cobalt	**0.000684**	**J**	0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:09	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:09	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**24.0**		10.0	10.0	mg/L			04/16/20 10:22	1

Client Sample ID: BAW-8

Date Collected: 04/14/20 09:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-7

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.19		1.00	0.320	mg/L			04/26/20 03:15	1
Fluoride	0.0500	J	0.100	0.0263	mg/L			04/26/20 03:15	1
Sulfate	2.75		1.00	0.380	mg/L			04/26/20 03:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:12	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:12	1
Barium	0.0253		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:12	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:12	1
Boron	0.128		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:12	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:47	1
Calcium	9.93		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:12	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:12	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:12	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:12	1
Lithium	0.123		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	60.0		10.0	10.0	mg/L			04/16/20 10:22	1

Client Sample ID: BAW-9

Date Collected: 04/14/20 10:45
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-8

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.46		1.00	0.320	mg/L			04/26/20 03:30	1
Fluoride	0.0449	J	0.100	0.0263	mg/L			04/26/20 03:30	1
Sulfate	2.84		1.00	0.380	mg/L			04/26/20 03:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000487	J	0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:14	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:14	1
Barium	0.0214		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:14	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:14	1
Boron	0.158		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:14	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:51	1
Calcium	8.71		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:14	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:14	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:14	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:14	1
Lithium	0.118		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72.0		10.0	10.0	mg/L			04/16/20 10:22	1

Client Sample ID: DUP-02

Lab Sample ID: 180-104636-9

Date Collected: 04/14/20 09:34

Matrix: Water

Date Received: 04/15/20 10:15

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.49**		1.00	0.320	mg/L			04/26/20 03:46	1
Fluoride	**0.0492**	**J**	0.100	0.0263	mg/L			04/26/20 03:46	1
Sulfate	**2.61**		1.00	0.380	mg/L			04/26/20 03:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:17	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:17	1
Barium	**0.0384**		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:17	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:17	1
Boron	**0.0396**	**J**	0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:17	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:54	1
Calcium	**0.636**		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:17	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:17	1
Cobalt	**0.000894**	**J**	0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:17	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:17	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**31.0**		10.0	10.0	mg/L			04/16/20 10:22	1

Client Sample ID: FB-02

Lab Sample ID: 180-104636-10

Date Collected: 04/14/20 09:30

Matrix: Water

Date Received: 04/15/20 10:15

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			04/26/20 04:01	1
Fluoride	**0.0598**	**J**	0.100	0.0263	mg/L			04/26/20 04:01	1
Sulfate	<0.380		1.00	0.380	mg/L			04/26/20 04:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:24	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:24	1
Barium	<0.00160		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:24	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:24	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:24	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 18:58	1
Calcium	<0.127		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:24	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:24	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:24	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:24	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 18:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			04/16/20 10:22	1

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

Job ID: 180-104636-1

Client Sample ID: EB-02

Date Collected: 04/14/20 09:10
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-11

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			04/26/20 04:47	1
Fluoride	**0.0386**	**J**	0.100	0.0263	mg/L			04/26/20 04:47	1
Sulfate	<0.380		1.00	0.380	mg/L			04/26/20 04:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 14:26	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 14:26	1
Barium	<0.00160		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 14:26	1
Lead	<0.000128		0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 14:26	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 14:26	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/30/20 19:01	1
Calcium	<0.127		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 14:26	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 14:26	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 14:26	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 14:26	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/30/20 19:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			04/16/20 10:22	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-313835/42
Matrix: Water
Analysis Batch: 313835

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			04/25/20 19:52	1
Fluoride	<0.0263		0.100	0.0263	mg/L			04/25/20 19:52	1
Sulfate	<0.380		1.00	0.380	mg/L			04/25/20 19:52	1

Lab Sample ID: MB 180-313835/6
Matrix: Water
Analysis Batch: 313835

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			04/25/20 10:56	1
Fluoride	<0.0263		0.100	0.0263	mg/L			04/25/20 10:56	1
Sulfate	<0.380		1.00	0.380	mg/L			04/25/20 10:56	1

Lab Sample ID: LCS 180-313835/41
Matrix: Water
Analysis Batch: 313835

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	49.44		mg/L		99	80 - 120
Fluoride	2.50	2.564		mg/L		103	80 - 120
Sulfate	50.0	49.42		mg/L		99	80 - 120

Lab Sample ID: LCS 180-313835/5
Matrix: Water
Analysis Batch: 313835

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	49.94		mg/L		100	80 - 120
Fluoride	2.50	2.604		mg/L		104	80 - 120
Sulfate	50.0	49.64		mg/L		99	80 - 120

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-313149/1-A
Matrix: Water
Analysis Batch: 313842

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 313149

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000313		0.00100	0.000313	mg/L		04/17/20 09:01	04/24/20 13:16	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 13:16	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		04/17/20 09:01	04/24/20 13:16	1
Barium	<0.00160		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 13:16	1
Barium	<0.00160		0.0100	0.00160	mg/L		04/17/20 09:01	04/24/20 13:16	1
Lead	0.0002450	J	0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 13:16	1
Lead	0.0002450	J	0.00100	0.000128	mg/L		04/17/20 09:01	04/24/20 13:16	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 13:16	1
Boron	<0.0386		0.0800	0.0386	mg/L		04/17/20 09:01	04/24/20 13:16	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/24/20 13:16	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		04/17/20 09:01	04/24/20 13:16	1
Calcium	<0.127		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 13:16	1

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

Lab Sample ID: MB 180-313149/1-A
Matrix: Water
Analysis Batch: 313842

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 313149

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.127		0.500	0.127	mg/L		04/17/20 09:01	04/24/20 13:16	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 13:16	1
Thallium	<0.000148		0.00100	0.000148	mg/L		04/17/20 09:01	04/24/20 13:16	1
Cobalt	<0.000134		0.000500	0.000134	mg/L		04/17/20 09:01	04/24/20 13:16	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		04/17/20 09:01	04/24/20 13:16	1
Molybdenum	<0.000610		0.00500	0.000610	mg/L		04/17/20 09:01	04/24/20 13:16	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		04/17/20 09:01	04/24/20 13:16	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/24/20 13:16	1
Lithium	<0.00339		0.00500	0.00339	mg/L		04/17/20 09:01	04/24/20 13:16	1

Lab Sample ID: LCS 180-313149/2-A
Matrix: Water
Analysis Batch: 313842

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 313149

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.151		mg/L		115	80 - 120
Cadmium	0.500	0.5491		mg/L		110	80 - 120
Cadmium	0.500	0.5491		mg/L		110	80 - 120
Barium	1.00	1.064		mg/L		106	80 - 120
Barium	1.00	1.064		mg/L		106	80 - 120
Lead	0.500	0.5277		mg/L		106	80 - 120
Lead	0.500	0.5277		mg/L		106	80 - 120
Boron	1.25	1.322		mg/L		106	80 - 120
Boron	1.25	1.322		mg/L		106	80 - 120
Calcium	25.0	26.24		mg/L		105	80 - 120
Calcium	25.0	26.24		mg/L		105	80 - 120
Thallium	1.00	1.074		mg/L		107	80 - 120
Thallium	1.00	1.074		mg/L		107	80 - 120
Cobalt	0.500	0.4795		mg/L		96	80 - 120
Cobalt	0.500	0.4795		mg/L		96	80 - 120
Molybdenum	0.500	0.5240		mg/L		105	80 - 120
Molybdenum	0.500	0.5240		mg/L		105	80 - 120

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

Lab Sample ID: MB 180-313059/2
Matrix: Water
Analysis Batch: 313059

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	<10.0		10.0	10.0	mg/L			04/16/20 09:57	1

Lab Sample ID: LCS 180-313059/1
Matrix: Water
Analysis Batch: 313059

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	242	232.0		mg/L		96	80 - 120

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

Lab Sample ID: MB 180-313060/2
Matrix: Water
Analysis Batch: 313060

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	<10.0		10.0	10.0	mg/L			04/16/20 10:22	1

Lab Sample ID: LCS 180-313060/1
Matrix: Water
Analysis Batch: 313060

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	242	274.0		mg/L		113	80 - 120

Lab Sample ID: 180-104636-5 DU
Matrix: Water
Analysis Batch: 313060

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	77.0		85.00		mg/L		10	10

QC Association Summary

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

Job ID: 180-104636-1

HPLC/IC

Analysis Batch: 313835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total/NA	Water	EPA 9056A	
180-104636-2	BAW-2A	Total/NA	Water	EPA 9056A	
180-104636-3	BAW-3	Total/NA	Water	EPA 9056A	
180-104636-4	BAW-4	Total/NA	Water	EPA 9056A	
180-104636-5	BAW-5	Total/NA	Water	EPA 9056A	
180-104636-6	BAW-7	Total/NA	Water	EPA 9056A	
180-104636-7	BAW-8	Total/NA	Water	EPA 9056A	
180-104636-8	BAW-9	Total/NA	Water	EPA 9056A	
180-104636-9	DUP-02	Total/NA	Water	EPA 9056A	
180-104636-10	FB-02	Total/NA	Water	EPA 9056A	
180-104636-11	EB-02	Total/NA	Water	EPA 9056A	
MB 180-313835/42	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-313835/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-313835/41	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-313835/5	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 313149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total Recoverable	Water	3005A	
180-104636-2	BAW-2A	Total Recoverable	Water	3005A	
180-104636-3	BAW-3	Total Recoverable	Water	3005A	
180-104636-4	BAW-4	Total Recoverable	Water	3005A	
180-104636-5	BAW-5	Total Recoverable	Water	3005A	
180-104636-6	BAW-7	Total Recoverable	Water	3005A	
180-104636-7	BAW-8	Total Recoverable	Water	3005A	
180-104636-8	BAW-9	Total Recoverable	Water	3005A	
180-104636-9	DUP-02	Total Recoverable	Water	3005A	
180-104636-10	FB-02	Total Recoverable	Water	3005A	
180-104636-11	EB-02	Total Recoverable	Water	3005A	
MB 180-313149/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-313149/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 313836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-313149/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	313149
LCS 180-313149/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	313149

Analysis Batch: 313842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total Recoverable	Water	EPA 6020B	313149
180-104636-2	BAW-2A	Total Recoverable	Water	EPA 6020B	313149
180-104636-3	BAW-3	Total Recoverable	Water	EPA 6020B	313149
180-104636-4	BAW-4	Total Recoverable	Water	EPA 6020B	313149
180-104636-5	BAW-5	Total Recoverable	Water	EPA 6020B	313149
180-104636-6	BAW-7	Total Recoverable	Water	EPA 6020B	313149
180-104636-7	BAW-8	Total Recoverable	Water	EPA 6020B	313149
180-104636-8	BAW-9	Total Recoverable	Water	EPA 6020B	313149
180-104636-9	DUP-02	Total Recoverable	Water	EPA 6020B	313149
180-104636-10	FB-02	Total Recoverable	Water	EPA 6020B	313149

Metals (Continued)

Analysis Batch: 313842 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-11	EB-02	Total Recoverable	Water	EPA 6020B	313149
MB 180-313149/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	313149
LCS 180-313149/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	313149

Analysis Batch: 314348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total Recoverable	Water	EPA 6020B	313149
180-104636-2	BAW-2A	Total Recoverable	Water	EPA 6020B	313149
180-104636-3	BAW-3	Total Recoverable	Water	EPA 6020B	313149
180-104636-4	BAW-4	Total Recoverable	Water	EPA 6020B	313149
180-104636-5	BAW-5	Total Recoverable	Water	EPA 6020B	313149
180-104636-6	BAW-7	Total Recoverable	Water	EPA 6020B	313149
180-104636-7	BAW-8	Total Recoverable	Water	EPA 6020B	313149
180-104636-8	BAW-9	Total Recoverable	Water	EPA 6020B	313149
180-104636-9	DUP-02	Total Recoverable	Water	EPA 6020B	313149
180-104636-10	FB-02	Total Recoverable	Water	EPA 6020B	313149
180-104636-11	EB-02	Total Recoverable	Water	EPA 6020B	313149

General Chemistry

Analysis Batch: 313059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total/NA	Water	SM 2540C	
180-104636-2	BAW-2A	Total/NA	Water	SM 2540C	
180-104636-3	BAW-3	Total/NA	Water	SM 2540C	
MB 180-313059/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-313059/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 313060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-4	BAW-4	Total/NA	Water	SM 2540C	
180-104636-5	BAW-5	Total/NA	Water	SM 2540C	
180-104636-6	BAW-7	Total/NA	Water	SM 2540C	
180-104636-7	BAW-8	Total/NA	Water	SM 2540C	
180-104636-8	BAW-9	Total/NA	Water	SM 2540C	
180-104636-9	DUP-02	Total/NA	Water	SM 2540C	
180-104636-10	FB-02	Total/NA	Water	SM 2540C	
180-104636-11	EB-02	Total/NA	Water	SM 2540C	
MB 180-313060/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-313060/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-104636-5 DU	BAW-5	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Philip Evans	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-60039-12246.2
Client Contact: Lauren Petty / Lauren Parker	Phone: 850-336-0192	E-Mail: veronica.bortot@testamericainc.com		Page: Page 2 of 2
Company: Southern Company Services				Job #:
Address:	Due Date Requested:		Analysis Requested	
City:	TAT Requested (days):			
State, Zip:				
Phone:	PO #: SCS10382606			
Email:	WO #:			
Project Name: CCR - Plant Daniel Ash	Project #: 18020047			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	6020B - 11 Custom Metals see below	2540C_Calcd, 9056A_ORGFM_28D Cl, Fl, Sor	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
BAW-1	4/14/20	0847	G	Water			X	X	X		
BAW-2A		1034		Water							
BAW-3		1142									
BAW-4		1130									
BAW-5		0840									
BAW-7		0946									
BAW-8		0940									
BAW-9		1045									
Dup-02		0934									
FB-02		0930									
EB-02	4/14/20	0910	G	water			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

metals B, Ca, Ba,Co,As, Be,Cd, Pb, Li, Mo Tl

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by:	Date/Time: 4/14/20 1500	Company RDH	Received by:	Date/Time: 4/15/20 1015	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019


WED – 15 APR 10:30A
PRIORITY OVERNIGHT
15238 PIT
PA–US
FedEx
TRK# 0221 1516 9323 3255
XH AGCA
Uncorrected temp 1.9 °C
Thermometer ID 17
CF 0 Initials
PT-WI-SR-001 effective 7/26/13
WED – 15 APR
PRIORITY OVERNIGHT
15238 PIT
PA–US
FedEx
TRK# 0221 1516 9323 3200
XH AGCA
Uncorrected temp 1.2 °C
Thermometer ID 17
CF 0 Initials
PT-WI-SR-001 effective 7/26/13
ORIGIN ID:LIYA (678) 966-9991
RICK HAGENDORFER
RDH ENVIRONMENTAL SERVICES INC
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US
SHIP DATE: 08APR20
ACTWGT: 25.00 LB MAN
CAD: 859116/CAFE3313
TO SAMPLE RECIEVING
EUROFINS TESTAMRICA PITTSBURGH
301 ALPHA DR.
RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058
REF: S180 – 60038
RMA:
FedEx Express
180-104636 Waybill


THIS PACKAGE CONFORMS
TO 49 CFR 173.4
FedEx
TRK# 0221 1516 9323 3244
WED – 15 APR 10
PRIORITY OVERNI
XH AGCA
15
PA–US
ORIGIN ID:LIYA (678) 966-9991
RICK HAGENDORFER
RDH ENVIRONMENTAL SERVICES INC
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US
TO SAMPLE RECIEVING
EUROFINS TESTAMRICA PITTSBURG
301 ALPHA DR.
RIDC PARK
PITTSBURGH PA 15238
(412) 963–7058
REF: S180–60038
RMA:
FedEx Express
Uncorrected temp 1.6 °C
Thermometer ID 17
CF
Initials
PT-WI-SR-001 effective 7/26/13
RT 97
FZ
1
10:30 A
3244
04.15
WED – 15 APR 10:30A
PRIORITY OVERNIGHT
15238 PIT
PA–US
CA
Initials

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-104636-1

Login Number: 104636
List Number: 1
Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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	

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-104636-2
Client Project/Site: CCR - Plant Daniel Ash Pond

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty

Authorized for release by:
5/15/2020 3:52:00 PM

Shali Brown, Project Manager II
(615)301-5031
shali.brown@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

Case Narrative

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

Job ID: 180-104636-2

Job ID: 180-104636-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-104636-2

Comments
No additional comments.

Receipt
The samples were received on 4/15/2020 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2º C, 1.6º C, 1.8º C and 1.9º C.

RAD
Methods 903.0, 9315: Radium-226 Prep Batch 160-468608
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
BAW-1 (180-104636-1), BAW-2A (180-104636-2), BAW-3 (180-104636-3), BAW-4 (180-104636-4), BAW-5 (180-104636-5), BAW-7 (180-104636-6), BAW-8 (180-104636-7), BAW-9 (180-104636-8), DUP-02 (180-104636-9), FB-02 (180-104636-10), EB-02 (180-104636-11), (LCS 160-468608/1-A), (LCSD 160-468608/2-A) and (MB 160-468608/21-A)

Methods 903.0, 9315: Radium-226 Prep Batch 160-468608
The following samples exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required. EB-02 (180-104636-11) and (MB 160-468608/21-A)

Methods 904.0, 9320: Ra-228 Prep Batch 160-468611
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
BAW-1 (180-104636-1), BAW-2A (180-104636-2), BAW-3 (180-104636-3), BAW-4 (180-104636-4), BAW-5 (180-104636-5), BAW-7 (180-104636-6), BAW-8 (180-104636-7), BAW-9 (180-104636-8), DUP-02 (180-104636-9), FB-02 (180-104636-10), EB-02 (180-104636-11), (LCS 160-468611/1-A), (LCSD 160-468611/2-A) and (MB 160-468611/21-A)

Method PrecSep_0: Radium 228 Prep batch 160-468611:
Insufficient sample volume was available to perform a sample duplicate for the following samples: BAW-1 (180-104636-1), BAW-2A (180-104636-2), BAW-3 (180-104636-3), BAW-4 (180-104636-4), BAW-5 (180-104636-5), BAW-7 (180-104636-6), BAW-8 (180-104636-7), BAW-9 (180-104636-8), DUP-02 (180-104636-9), FB-02 (180-104636-10) and EB-02 (180-104636-11). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-468608:
Insufficient sample volume was available to perform a sample duplicate for the following samples: BAW-1 (180-104636-1), BAW-2A (180-104636-2), BAW-3 (180-104636-3), BAW-4 (180-104636-4), BAW-5 (180-104636-5), BAW-7 (180-104636-6), BAW-8 (180-104636-7), BAW-9 (180-104636-8), DUP-02 (180-104636-9), FB-02 (180-104636-10) and EB-02 (180-104636-11). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

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

Job ID: 180-104636-2

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)
MQL	Method Quantitation Limit
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
Job ID: 180-104636-2
Project/Site: CCR - Plant Daniel Ash Pond

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20 *
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20 *
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Job ID: 180-104636-2
Project/Site: CCR - Plant Daniel Ash Pond

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

Sample Summary

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

Job ID: 180-104636-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-104636-1	BAW-1	Water	04/14/20 08:47	04/15/20 10:15	
180-104636-2	BAW-2A	Water	04/14/20 10:34	04/15/20 10:15	
180-104636-3	BAW-3	Water	04/14/20 11:42	04/15/20 10:15	
180-104636-4	BAW-4	Water	04/14/20 11:30	04/15/20 10:15	
180-104636-5	BAW-5	Water	04/14/20 08:40	04/15/20 10:15	
180-104636-6	BAW-7	Water	04/14/20 09:46	04/15/20 10:15	
180-104636-7	BAW-8	Water	04/14/20 09:40	04/15/20 10:15	
180-104636-8	BAW-9	Water	04/14/20 10:45	04/15/20 10:15	
180-104636-9	DUP-02	Water	04/14/20 09:34	04/15/20 10:15	
180-104636-10	FB-02	Water	04/14/20 09:30	04/15/20 10:15	
180-104636-11	EB-02	Water	04/14/20 09:10	04/15/20 10:15	

Method Summary

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

Job ID: 180-104636-2

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

Lab Chronicle

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

Job ID: 180-104636-2

Client Sample ID: BAW-1
Date Collected: 04/14/20 08:47
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.94 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:11	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.94 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 18:58	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-2A
Date Collected: 04/14/20 10:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.48 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:11	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.48 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 18:59	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-3
Date Collected: 04/14/20 11:42
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.06 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:11	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.06 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 18:59	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-4
Date Collected: 04/14/20 11:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.51 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:12	KLS	TAL SL
	Instrument ID: GFPCBLUE									

Lab Chronicle

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

Job ID: 180-104636-2

Client Sample ID: BAW-4
Date Collected: 04/14/20 11:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.51 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 18:59	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-5
Date Collected: 04/14/20 08:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.20 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:12	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.20 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:00	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-7
Date Collected: 04/14/20 09:46
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.58 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:12	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.58 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:00	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-8
Date Collected: 04/14/20 09:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.70 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:12	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.70 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:00	CJQ	TAL SL
	Instrument ID: GFPCORANGE									

Lab Chronicle

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

Job ID: 180-104636-2

Client Sample ID: BAW-8
Date Collected: 04/14/20 09:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-7
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	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL

Client Sample ID: BAW-9
Date Collected: 04/14/20 10:45
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.04 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:12	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.04 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:00	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-02
Date Collected: 04/14/20 09:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.64 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 10:12	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.64 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:00	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: FB-02
Date Collected: 04/14/20 09:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.12 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 11:56	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.12 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:01	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Lab Chronicle

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

Job ID: 180-104636-2

Client Sample ID: EB-02

Date Collected: 04/14/20 09:10
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.57 mL	1.0 g	468608	04/22/20 13:37	RBR	TAL SL
Total/NA	Analysis	9315		1			470394	05/14/20 11:56	KLS	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.57 mL	1.0 g	468611	04/22/20 13:58	RBR	TAL SL
Total/NA	Analysis	9320		1			469537	05/05/20 19:01	CJQ	TAL SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			470554	05/15/20 07:39	SMP	TAL SL
	Instrument ID: NOEQUIP									

Laboratory References:

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

Analyst References:

Lab: TAL SL

Batch Type: Prep

RBR = Rachael Ratcliff

Batch Type: Analysis

CJQ = Caleb Quinn

KLS = Kody Saulters

SMP = Siobhan Perry

Client Sample ID: BAW-1

Date Collected: 04/14/20 08:47
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-1

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	0.194		0.108	0.109	1.00	0.145	pCi/L	04/22/20 13:37	05/14/20 10:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.1*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:11*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.130	U	0.269	0.269	1.00	0.458	pCi/L	04/22/20 13:58	05/05/20 18:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:58*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:58*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.324	U	0.290	0.290	5.00	0.458	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-2A

Date Collected: 04/14/20 10:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-2

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	0.170		0.0803	0.0818	1.00	0.0898	pCi/L	04/22/20 13:37	05/14/20 10:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:11*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.137	U	0.206	0.207	1.00	0.348	pCi/L	04/22/20 13:58	05/05/20 18:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:59*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:59*	*1*

Client Sample ID: BAW-2A

Date Collected: 04/14/20 10:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-2

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	0.307	U	0.221	0.223	5.00	0.348	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-3

Date Collected: 04/14/20 11:42
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-3

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	0.106	U	0.0764	0.0770	1.00	0.108	pCi/L	04/22/20 13:37	05/14/20 10:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:11*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.232	U	0.210	0.211	1.00	0.336	pCi/L	04/22/20 13:58	05/05/20 18:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:59*	*1*
Y Carrier	*87.5*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:59*	*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	**0.338**		0.223	0.225	5.00	0.336	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-4

Date Collected: 04/14/20 11:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-4

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	0.0473	U	0.0676	0.0678	1.00	0.115	pCi/L	04/22/20 13:37	05/14/20 10:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:12*	*1*

Client Sample ID: BAW-4

Date Collected: 04/14/20 11:30
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-4
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00655	U	0.210	0.210	1.00	0.379	pCi/L	04/22/20 13:58	05/05/20 18:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:59*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 18:59*	*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	0.0408	U	0.221	0.221	5.00	0.379	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-5

Date Collected: 04/14/20 08:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-5
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	**0.145**		0.0822	0.0832	1.00	0.104	pCi/L	04/22/20 13:37	05/14/20 10:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.2*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.231	U	0.245	0.246	1.00	0.400	pCi/L	04/22/20 13:58	05/05/20 19:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.2*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*
Y Carrier	*86.7*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.376	U	0.258	0.260	5.00	0.400	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-7

Date Collected: 04/14/20 09:46
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-6

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	0.0878	U	0.0797	0.0801	1.00	0.123	pCi/L	04/22/20 13:37	05/14/20 10:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.2*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.241	U	0.247	0.248	1.00	0.401	pCi/L	04/22/20 13:58	05/05/20 19:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.2*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*
Y Carrier	*86.4*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.329	U	0.260	0.261	5.00	0.401	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-8

Date Collected: 04/14/20 09:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-7

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	0.0719	U	0.0718	0.0721	1.00	0.112	pCi/L	04/22/20 13:37	05/14/20 10:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.278	U	0.305	0.306	1.00	0.500	pCi/L	04/22/20 13:58	05/05/20 19:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*
Y Carrier	*83.0*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*

Client Sample ID: BAW-8

Date Collected: 04/14/20 09:40
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-7
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.350	U	0.313	0.314	5.00	0.500	pCi/L		05/15/20 07:39	1

Client Sample ID: BAW-9

Date Collected: 04/14/20 10:45
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-8
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	0.0537	U	0.0678	0.0680	1.00	0.112	pCi/L	04/22/20 13:37	05/14/20 10:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.179	U	0.259	0.260	1.00	0.434	pCi/L	04/22/20 13:58	05/05/20 19:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*
Y Carrier	*82.6*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.233	U	0.268	0.269	5.00	0.434	pCi/L		05/15/20 07:39	1

Client Sample ID: DUP-02

Date Collected: 04/14/20 09:34
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-9
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	**0.187**		0.0959	0.0974	1.00	0.121	pCi/L	04/22/20 13:37	05/14/20 10:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*04/22/20 13:37*	*05/14/20 10:12*	*1*

Client Sample ID: DUP-02

Lab Sample ID: 180-104636-9

Date Collected: 04/14/20 09:34

Matrix: Water

Date Received: 04/15/20 10:15

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.485		0.273	0.276	1.00	0.412	pCi/L	04/22/20 13:58	05/05/20 19:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*
Y Carrier	*85.2*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:00*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.672		0.289	0.293	5.00	0.412	pCi/L		05/15/20 07:39	1

Client Sample ID: FB-02

Lab Sample ID: 180-104636-10

Date Collected: 04/14/20 09:30

Matrix: Water

Date Received: 04/15/20 10:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00635	U	0.0493	0.0493	1.00	0.105	pCi/L	04/22/20 13:37	05/14/20 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.4*		*40 - 110*	*04/22/20 13:37*	*05/14/20 11:56*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0174	U	0.221	0.221	1.00	0.393	pCi/L	04/22/20 13:58	05/05/20 19:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.4*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:01*	*1*
Y Carrier	*88.6*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:01*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0110	U	0.226	0.226	5.00	0.393	pCi/L		05/15/20 07:39	1

Client Sample Results

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

Job ID: 180-104636-2

Client Sample ID: EB-02

Date Collected: 04/14/20 09:10
Date Received: 04/15/20 10:15

Lab Sample ID: 180-104636-11

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	-0.0740	U	0.0347	0.0353	1.00	0.119	pCi/L	04/22/20 13:37	05/14/20 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.1*		*40 - 110*	*04/22/20 13:37*	*05/14/20 11:56*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0873	U	0.220	0.220	1.00	0.411	pCi/L	04/22/20 13:58	05/05/20 19:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:01*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:01*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.161	U	0.223	0.223	5.00	0.411	pCi/L		05/15/20 07:39	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-468608/21-A
Matrix: Water
Analysis Batch: 470394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468608

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.06313	U	0.0411	0.0415	1.00	0.125	pCi/L	04/22/20 13:37	05/14/20 11:57	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.1*		*40 - 110*	*04/22/20 13:37*	*05/14/20 11:57*	*1*

Lab Sample ID: LCS 160-468608/1-A
Matrix: Water
Analysis Batch: 470394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468608

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	9.436		0.996	1.00	0.106	pCi/L	83	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.3*		*40 - 110*

Lab Sample ID: LCSD 160-468608/2-A
Matrix: Water
Analysis Batch: 470394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 468608

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	8.687		0.928	1.00	0.0998	pCi/L	77	75 - 125	0.39	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*94.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-468611/21-A
Matrix: Water
Analysis Batch: 469537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 468611

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3908	U	0.259	0.261	1.00	0.397	pCi/L	04/22/20 13:58	05/05/20 19:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.1*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:02*	*1*
Y Carrier	*87.9*		*40 - 110*	*04/22/20 13:58*	*05/05/20 19:02*	*1*

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

Lab Sample ID: LCS 160-468611/1-A
Matrix: Water
Analysis Batch: 469537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468611

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.87	8.035		0.960	1.00	0.361	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.3*		*40 - 110*
Y Carrier	*88.2*		*40 - 110*

Lab Sample ID: LCSD 160-468611/2-A
Matrix: Water
Analysis Batch: 469537

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 468611

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.87	7.616		0.927	1.00	0.326	pCi/L	86	75 - 125	0.22	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*94.8*		*40 - 110*
Y Carrier	*87.5*		*40 - 110*

Rad

Prep Batch: 468608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total/NA	Water	PrecSep-21	
180-104636-2	BAW-2A	Total/NA	Water	PrecSep-21	
180-104636-3	BAW-3	Total/NA	Water	PrecSep-21	
180-104636-4	BAW-4	Total/NA	Water	PrecSep-21	
180-104636-5	BAW-5	Total/NA	Water	PrecSep-21	
180-104636-6	BAW-7	Total/NA	Water	PrecSep-21	
180-104636-7	BAW-8	Total/NA	Water	PrecSep-21	
180-104636-8	BAW-9	Total/NA	Water	PrecSep-21	
180-104636-9	DUP-02	Total/NA	Water	PrecSep-21	
180-104636-10	FB-02	Total/NA	Water	PrecSep-21	
180-104636-11	EB-02	Total/NA	Water	PrecSep-21	
MB 160-468608/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-468608/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-468608/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 468611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-104636-1	BAW-1	Total/NA	Water	PrecSep_0	
180-104636-2	BAW-2A	Total/NA	Water	PrecSep_0	
180-104636-3	BAW-3	Total/NA	Water	PrecSep_0	
180-104636-4	BAW-4	Total/NA	Water	PrecSep_0	
180-104636-5	BAW-5	Total/NA	Water	PrecSep_0	
180-104636-6	BAW-7	Total/NA	Water	PrecSep_0	
180-104636-7	BAW-8	Total/NA	Water	PrecSep_0	
180-104636-8	BAW-9	Total/NA	Water	PrecSep_0	
180-104636-9	DUP-02	Total/NA	Water	PrecSep_0	
180-104636-10	FB-02	Total/NA	Water	PrecSep_0	
180-104636-11	EB-02	Total/NA	Water	PrecSep_0	
MB 160-468611/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-468611/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-468611/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

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Client Information	Sampler: Philip Evans	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-60039-12246.2
Client Contact: Lauren Petty / Lauren Parker	Phone: 850-336-0192	E-Mail: veronica.bortot@testamericainc.com		Page: Page 2 of 2
Company: Southern Company Services				Job #:
Address:	Due Date Requested:			
City:	TAT Requested (days):			
State, Zip:				
Phone:	PO #: SCS10382606			
Email:	WO #:			
Project Name: CCR - Plant Daniel Ash	Project #: 18020047			
Site:	SSOW#:			

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	6020B - 11 Custom Metals see below	2540C_Calcd, 9056A_ORGFM_28D Cl, Fl, Sor	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
BAW-1	4/14/20	0847	G	Water			X	X	X		
BAW-2A		1034		Water							
BAW-3		1142									
BAW-4		1130									
BAW-5		0840									
BAW-7		0946									
BAW-8		0940									
BAW-9		1045									
Dup-02		0934									
FB-02		0930									
EB-02	4/14/20	0910	G	water			X	X	X		

180-104636 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

metals B, Ca, Ba,Co,As, Be,Cd, Pb, Li, Mo Tl

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by:	Date/Time: 4/14/20 1500	Company RDH	Received by:	Date/Time: 4/15/20 1015	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

WED – 15 APR 10:30A
PRIORITY OVERNIGHT
15238
PIT
PA–US
FedEx
TRK# 1516 9323 3255
0221
XH AGCA
Uncorrected temp
Thermometer ID
Initials
CF
°C
PT-WI-SR-001 effective 7/26/13
SAMPLE RECIEVING
EUROFINS TESTAMRICA PITTSBURGH
301 ALPHA DR.
RIDC PARK
PITTSBURGH PA 15238
(412) 963-7068
REF: S180-60038
RMA:
FedEx Express
WED – 15 APR
PRIORITY OVERNI
15238
PIT
PA–US
FedEx
TRK# 1516 9323 3200
0221
XH AGCA
Uncorrected temp
Thermometer ID
Initials
CF
°C
PT-WI-SR-001 effective 7/26/13
180-104636 Waybill
ORIGIN ID:
RICK HAGEN
RDH ENVIRO
5720 DOVE
PACE, FL 3
UNITED STA
TO SAMP
EUROF
301 AL
RIDC F
PITTS
(412) 963-706
REF: S180-60038
RMA:


TO 49 CFR 173.4
FedEx
TRK# 0221 1516 9323 3244
WED – 15 APR 10
PRIORITY OVERNI
XH AGCA
15
PA–US
ORIGIN ID:LIYA (678) 966-9991
RICK HAGENDORFER
RDH ENVIRONMENTAL SERVICES INC
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US
TO SAMPLE RECIEVING
EUROFINS TESTAMRICA PITTSBURG
301 ALPHA DR.
RIDC PARK
PITTSBURGH PA 15238
(412) 963–7058
REF: S180 – 60038
RMA:
FedEx Express
Uncorrected temp 1.6 °C
Thermometer ID 17
CF
Initials
PT-WI-SR-001 effective 7/26/13
RT 97
FZ
1
10:30 A
3244
04.15
WED – 15 APR 10:30A
PRIORITY OVERNIGHT
15238
PIT
PA–US
CA
Initials

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information (Sub Contract Lab)

Field	Value
Client Contact	Shipping/Receiving
Company	TestAmerica Laboratories, Inc.
Address	13715 Rider Trail North,
City	Earth City
State, Zip	MO, 63045
Phone	314-298-8566(Tel) 314-298-8757(Fax)
Email	
Project Name	CCR - Plant Daniel Ash Pond
Site	
Sampler	
Phone	
Due Date Requested	5/18/2020
TAT Requested (days)	
PO #	
WO #	
Project #	18020047
SSOW#	
Lab PM	Bortot, Veronica
E-Mail	veronica.bortot@testamericainc.com
Accreditations Required (See note)	
Carrier Tracking No(s)	
State of Origin	Mississippi
COC No	180-391186.1
Page	Page 1 of 2
Job #	180-104636-2

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; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 (MOD) Copy Analytes	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAW-1 (180-104636-1)	4/14/20	08:47 Central		Water			X	X	X	1	
BAW-2A (180-104636-2)	4/14/20	10:34 Central		Water			X	X	X	1	
BAW-3 (180-104636-3)	4/14/20	11:42 Central		Water			X	X	X	1	
BAW-4 (180-104636-4)	4/14/20	11:30 Central		Water			X	X	X	1	
BAW-5 (180-104636-5)	4/14/20	08:40 Central		Water			X	X	X	1	
BAW-7 (180-104636-6)	4/14/20	09:46 Central		Water			X	X	X	1	
BAW-8 (180-104636-7)	4/14/20	09:40 Central		Water			X	X	X	1	
BAW-9 (180-104636-8)	4/14/20	10:45 Central		Water			X	X	X	1	
DUP-02 (180-104636-9)	4/14/20	09:34 Central		Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)   Primary Deliverable Rank: 2

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	04/15/2020 1200	PITT	FE		
FE			Michakeninkinger	4/16/2020 10:08	ETA STL

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

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-391186.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: veronica.bortot@testamericainc.com	State of Origin: Mississippi	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-104636-2
Address: 13715 Rider Trail North,	Due Date Requested: 5/18/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 18020047			
Project Name: CCR - Plant Daniel Ash Pond	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 (MOD) Copy Analytes	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FB-02 (180-104636-10)	4/14/20	09:30 Central		Water			X	X	X	1	
EB-02 (180-104636-11)	4/14/20	09:10 Central		Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the labo

Possible Hazard Identification	**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 04/15/2020 1700	Company: DAT	Received by: FE	Date/Time:	Company	
Relinquished by: FE	Date/Time:	Company	Received by: Micha Koninhings	Date/Time: 4/16/2020 10:03	Company: ETA SL	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-104636-2

Login Number: 104636
List Number: 1
Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-104636-2

Login Number: 104636
List Number: 2
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 04/16/20 11:18 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.	True	
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	
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	

Product Name: Low-Flow System

Date: 2020-04-14 08:41:22

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	72 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	64.1 ft

Well Information:		Pumping Information:	
Well ID	BAW-5	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.8013664 L
Well Total Depth	69.1 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.36 in
Depth to Water	33.90 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:18:32	300.02	22.71	6.16	111.94	1.55	33.93	0.29	-19.39
Last 5	08:23:32	600.02	22.89	6.17	112.20	1.50	33.93	0.18	-49.73
Last 5	08:28:32	900.02	22.94	6.21	112.79	1.34	33.93	0.18	-61.46
Last 5	08:33:33	1201.02	23.00	6.25	112.99	1.30	33.93	0.18	-67.36
Last 5	08:38:33	1501.02	23.03	6.26	113.43	1.45	33.93	0.18	-70.49
Variance 0			0.05	0.04	0.59			-0.00	-11.73
Variance 1			0.07	0.04	0.20			-0.00	-5.89
Variance 2			0.02	0.01	0.44			0.00	-3.13

Notes

Sample time@ 0840. Sunny 60.

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 09:39:41

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	63.7 ft

Well Information:		Pumping Information:	
Well ID	BAW-8	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7924396 L
Well Total Depth	68.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	33.80 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:17:05	300.03	22.29	6.00	77.99	1.90	33.85	0.38	-19.30
Last 5	09:22:05	600.02	22.48	5.98	77.66	1.88	33.85	0.24	-22.63
Last 5	09:27:05	900.02	22.67	6.00	78.62	1.82	33.85	0.20	-25.32
Last 5	09:32:05	1200.02	22.69	6.01	78.47	1.85	33.85	0.18	-26.95
Last 5	09:37:05	1500.03	22.71	6.00	79.59	1.89	33.85	0.17	-28.32
Variance 0			0.19	0.01	0.97			-0.04	-2.70
Variance 1			0.02	0.01	-0.15			-0.01	-1.63
Variance 2			0.03	-0.01	1.12			-0.01	-1.38

Notes

Sample time@ 0940. Sunny 60. EB-02@ 0910.

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 10:41:42

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	58.15 ft

Well Information:		Pumping Information:	
Well ID	BAW-9	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7924396 L
Well Total Depth	63.15 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.72 in
Depth to Water	33.12 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:19:51	900.04	23.15	5.99	78.47	4.40	33.18	0.17	-33.38
Last 5	10:24:53	1202.03	23.25	5.99	78.43	3.24	33.18	0.16	-35.97
Last 5	10:29:53	1502.03	23.34	5.99	78.56	2.98	33.18	0.14	-37.48
Last 5	10:34:53	1802.03	23.26	6.00	78.39	1.97	33.18	0.13	-38.47
Last 5	10:39:57	2106.03	23.34	6.00	78.71	1.52	33.18	0.12	-39.26
Variance 0			0.09	0.00	0.12			-0.01	-1.51
Variance 1			-0.08	0.01	-0.17			-0.01	-0.98
Variance 2			0.08	0.00	0.31			-0.01	-0.80

Notes

Sample time@ 1045. Sunny 65.

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 11:28:53

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Plant Daniel BAW wells	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	75 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	64.9 ft

Well Information:		Pumping Information:	
Well ID	BAW-4	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.8147567 L
Well Total Depth	69.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.6 in
Depth to Water	30.43 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:12:21	300.03	23.25	5.58	44.09	2.10	30.48	0.41	34.50
Last 5	11:17:21	600.03	23.52	5.50	43.78	1.94	30.48	0.26	38.63
Last 5	11:22:21	900.03	23.54	5.50	43.34	1.90	30.48	0.24	39.70
Last 5	11:27:21	1200.03	23.36	5.45	43.23	1.88	30.48	0.22	40.15
Last 5									
Variance 0			0.27	-0.08	-0.31			-0.16	4.14
Variance 1			0.01	-0.00	-0.44			-0.02	1.07
Variance 2			-0.18	-0.05	-0.11			-0.01	0.45

Notes

Sample time @ 1130. Sunny 70.

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 08:47:59

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Daniel BAW	Tubing Diameter	.17 in
Site Name	Plant Daniel BAW wells	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	632615		
Turbidity Make/Model	HACH	Pump placement from TOC	51 ft

Well Information:		Pumping Information:	
Well ID	BAW-1	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7528054 L
Well Total Depth	56 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.02 in
Depth to Water	23.17 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:26:18	900.02	23.07	6.14	52.72	0.88	23.19	6.39	102.88
Last 5	08:31:18	1200.02	23.11	5.76	46.30	0.81	23.19	6.08	99.17
Last 5	08:36:18	1500.02	23.19	5.42	45.46	0.95	23.19	5.91	95.51
Last 5	08:41:18	1800.02	23.31	5.33	44.79	0.90	23.19	6.00	96.40
Last 5	08:46:18	2100.02	23.25	5.23	44.12	0.83	23.19	5.93	95.02
Variance 0			0.08	-0.34	-0.84			-0.17	-3.66
Variance 1			0.12	-0.09	-0.67			0.08	0.89
Variance 2			-0.06	-0.10	-0.67			-0.07	-1.38

Notes

Sample@0847, Sunny 62

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 09:46:47

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Daniel BAW	Tubing Diameter	.17 in
Site Name	Plant Daniel BAW wells	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	632615		
Turbidity Make/Model	HACH	Pump placement from TOC	51 ft

Well Information:		Pumping Information:	
Well ID	BAW-7	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7528054 L
Well Total Depth	56 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.08 in
Depth to Water	27.42 ft	Total Volume Pumped	14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:25:33	900.02	22.18	4.92	41.58	1.74	27.50	4.37	101.18
Last 5	09:30:33	1200.02	22.29	4.89	41.88	1.45	27.50	4.19	103.11
Last 5	09:35:33	1500.02	22.27	4.89	42.19	1.09	27.50	4.11	104.52
Last 5	09:40:33	1800.02	22.28	4.88	41.91	0.87	27.50	3.96	106.72
Last 5	09:45:33	2100.02	22.30	4.94	40.40	1.03	27.50	4.03	105.11
Variance 0			-0.02	-0.00	0.31			-0.08	1.41
Variance 1			0.01	-0.01	-0.29			-0.15	2.20
Variance 2			0.02	0.06	-1.51			0.06	-1.61

Notes

Sample@0946, FB-2@ 0930, Sunny 62

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 10:34:45

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Daniel BAW	Tubing Diameter	.17 in
Site Name	Plant Daniel BAW wells	Tubing Length	69 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	632615		
Turbidity Make/Model	HACH	Pump placement from TOC	51 ft

Well Information:		Pumping Information:	
Well ID	BAW-2a	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7929762 L
Well Total Depth	56 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.04 in
Depth to Water	33.30 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:18:27	300.02	23.21	4.86	60.90	1.52	33.34	2.91	122.13
Last 5	10:23:27	600.02	23.52	4.84	60.73	1.11	33.34	2.92	123.32
Last 5	10:28:27	900.02	23.52	4.85	60.33	1.04	33.34	2.90	124.12
Last 5	10:33:27	1200.02	23.48	4.87	60.15	0.89	33.34	2.90	124.90
Last 5									
Variance 0			0.31	-0.02	-0.17			0.01	1.19
Variance 1			0.00	0.01	-0.40			-0.02	0.80
Variance 2			-0.04	0.01	-0.18			0.00	0.78

Notes

Sample@1034, DUP-2@0934, Sunny 65

Grab Samples

Product Name: Low-Flow System

Date: 2020-04-14 11:43:15

Project Information:		Pump Information:	
Operator Name	Brett Surles	Pump Model/Type	QED
Company Name	RDH	Tubing Type	PE
Project Name	Daniel BAW	Tubing Diameter	.17 in
Site Name	Plant Daniel BAW wells	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	632615		
Turbidity Make/Model	HACH	Pump placement from TOC	51 ft

Well Information:		Pumping Information:	
Well ID	BAW-3	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7528054 L
Well Total Depth	56 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.03 in
Depth to Water	32.87 ft	Total Volume Pumped	16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:21:51	1200.02	24.63	4.72	61.94	5.88	32.90	0.20	140.45
Last 5	11:26:51	1500.02	24.56	4.71	62.08	4.35	32.90	0.20	142.53
Last 5	11:31:51	1800.02	24.65	4.70	62.19	3.11	32.90	0.20	144.36
Last 5	11:36:51	2100.01	24.74	4.70	62.24	2.75	32.90	0.20	146.31
Last 5	11:41:51	2400.02	24.79	4.70	62.42	1.75	32.90	0.21	148.37
Variance 0			0.09	-0.00	0.10			0.01	1.84
Variance 1			0.09	-0.00	0.06			-0.00	1.95
Variance 2			0.06	0.00	0.17			0.01	2.05

Notes

Sample@1142, Sunny 69

Grab Samples

2nd
Semi-Annual
Monitoring Event

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-113166-1
Client Project/Site: CCR - Plant Daniel Ash Pond B

For:
Southern Company
3535 Colonnade Parkway
Bin S 530 EC
Birmingham, Alabama 35243

Attn: Lauren Parker

Authorized for release by:
11/27/2020 10:24:01 PM

Shali Brown, Project Manager II
(615)301-5031
Shali.Brown@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Job ID: 180-113166-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-113166-1

Comments
No additional comments.

Receipt
The samples were received on 11/4/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.6º C, 2.9º C and 3.4º 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
Method SM 2540C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for analysis: BAW-7 (180-113166-6), BAW-8 (180-113166-7), DUP-02 (180-113166-10) and EB-01 (180-113166-11).

Method SM 2540C: Elevated reporting limits are provided for the following samples due to insufficient sample provided for analysis: BAW-1 (180-113166-1), BAW-2A (180-113166-2), BAW-3 (180-113166-3), BAW-4 (180-113166-4), BAW-5 (180-113166-5), BAW-9 (180-113166-8), DUP-01 (180-113166-9), FB-01 (180-113166-12) and (180-113166-B-2 DU).

Method SM 2540C: Due to obtaining less than 2.5 mg of residue, reanalysis of the following samples were performed outside of the analytical holding time with additional volume.: BAW-7 (180-113166-6) and EB-01 (180-113166-11).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Job ID: 180-113166-1
Project/Site: CCR - Plant Daniel Ash Pond B

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

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Southern Company
Job ID: 180-113166-1
Project/Site: CCR - Plant Daniel Ash Pond B

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-113166-1	BAW-1	Water	10/30/20 09:10	11/04/20 09:00	
180-113166-2	BAW-2A	Water	10/30/20 09:50	11/04/20 09:00	
180-113166-3	BAW-3	Water	10/30/20 10:45	11/04/20 09:00	
180-113166-4	BAW-4	Water	10/30/20 12:20	11/04/20 09:00	
180-113166-5	BAW-5	Water	10/30/20 13:45	11/04/20 09:00	
180-113166-6	BAW-7	Water	11/02/20 15:50	11/04/20 09:00	
180-113166-7	BAW-8	Water	11/02/20 10:45	11/04/20 09:00	
180-113166-8	BAW-9	Water	10/30/20 14:30	11/04/20 09:00	
180-113166-9	DUP-01	Water	10/30/20 08:50	11/04/20 09:00	
180-113166-10	DUP-02	Water	11/02/20 09:45	11/04/20 09:00	
180-113166-11	EB-01	Water	11/02/20 10:55	11/04/20 09:00	
180-113166-12	FB-01	Water	10/30/20 09:15	11/04/20 09:00	

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

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 = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Client Sample ID: BAW-1
Date Collected: 10/30/20 09:10
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-1
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 9056A		1			336986	11/13/20 11:16	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336278	11/07/20 08:11	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 20:55	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:10	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-2A
Date Collected: 10/30/20 09:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-2
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 9056A		1			336986	11/14/20 01:41	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336278	11/07/20 08:11	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 20:58	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:11	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-3
Date Collected: 10/30/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-3
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 9056A		1			336986	11/14/20 02:29	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336278	11/07/20 08:11	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 21:01	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:12	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Client Sample ID: BAW-4

Date Collected: 10/30/20 12:20
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-4

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 9056A		1			336986	11/14/20 02:44	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336278	11/07/20 08:11	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 21:04	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:13	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-5

Date Collected: 10/30/20 13:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-5

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 9056A		1			336986	11/14/20 03:32	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336278	11/07/20 08:11	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 21:07	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:14	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-7

Date Collected: 11/02/20 15:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-6

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 9056A		1			336986	11/14/20 03:48	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336278	11/07/20 08:11	KHM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 21:10	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:15	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	337422	11/17/20 13:12	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Client Sample ID: BAW-8
Date Collected: 11/02/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-7
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 9056A		1			336986	11/14/20 04:04	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336236	11/06/20 14:43	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 17:36	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:16	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336451	11/09/20 17:15	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-9
Date Collected: 10/30/20 14:30
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-8
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 9056A		1			336986	11/14/20 04:19	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336236	11/06/20 14:43	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 17:39	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:17	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01
Date Collected: 10/30/20 08:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-9
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 9056A		1			336986	11/14/20 04:35	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336236	11/06/20 14:43	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 17:42	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:20	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Client Sample ID: DUP-02
Date Collected: 11/02/20 09:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-10
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 9056A		1			336986	11/14/20 04:51	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336236	11/06/20 14:43	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 17:45	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:21	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336451	11/09/20 17:15	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: EB-01
Date Collected: 11/02/20 10:55
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-11
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 9056A		1			336986	11/14/20 05:07	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336236	11/06/20 14:43	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 17:54	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336164	11/06/20 09:01	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 12:39	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	337422	11/17/20 13:12	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: FB-01
Date Collected: 10/30/20 09:15
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-12
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 9056A		1			336986	11/14/20 05:23	EPS	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	336236	11/06/20 14:43	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			337118	11/13/20 17:57	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	336168	11/06/20 09:22	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			336427	11/09/20 13:22	KEM	TAL PIT
	Instrument ID: HGZ									
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	336264	11/06/20 21:14	GRB	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

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 Daniel Ash Pond B

Job ID: 180-113166-1

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KHM = Kyle Mucroski
MM1 = Mary Beth Miller
TJO = Tyler Oliver

Batch Type: Analysis

EPS = Evan Scheuer
GRB = Gabriel Berghe
KEM = Kimberly Mahoney
RSK = Robert Kurtz

Client Sample ID: BAW-1

Date Collected: 10/30/20 09:10
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-1
Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.55**		1.00	0.320	mg/L			11/13/20 11:16	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/13/20 11:16	1
Sulfate	**0.910**	**J**	1.00	0.380	mg/L			11/13/20 11:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 20:55	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 20:55	1
Barium	**0.0314**		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 20:55	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 20:55	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 20:55	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 20:55	1
Calcium	**0.945**		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 20:55	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 20:55	1
Cobalt	**0.000924**	**J**	0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 20:55	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 20:55	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 20:55	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 20:55	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 20:55	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 20:55	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**34.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: BAW-2A

Date Collected: 10/30/20 09:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-2
Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.59**		1.00	0.320	mg/L			11/14/20 01:41	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 01:41	1
Sulfate	**3.97**		1.00	0.380	mg/L			11/14/20 01:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 20:58	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 20:58	1
Barium	**0.0334**		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 20:58	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 20:58	1
Boron	**0.0495**	**J**	0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 20:58	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 20:58	1
Calcium	**0.672**		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 20:58	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 20:58	1
Cobalt	**0.000972**	**J**	0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 20:58	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 20:58	1

Client Sample ID: BAW-2A

Date Collected: 10/30/20 09:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.00339		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 20:58	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 20:58	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 20:58	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 20:58	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**48.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: BAW-3

Date Collected: 10/30/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-3
Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.58**		1.00	0.320	mg/L			11/14/20 02:29	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 02:29	1
Sulfate	**1.44**		1.00	0.380	mg/L			11/14/20 02:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 21:01	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 21:01	1
Barium	**0.0349**		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 21:01	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 21:01	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 21:01	1
Cadmium	**0.000840**	**J**	0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 21:01	1
Calcium	**1.00**		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 21:01	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 21:01	1
Cobalt	**0.00657**		0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 21:01	1
Lead	**0.000136**	**J**	0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 21:01	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 21:01	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 21:01	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 21:01	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 21:01	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000497**		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**40.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: BAW-4

Date Collected: 10/30/20 12:20
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-4

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.49**		1.00	0.320	mg/L			11/14/20 02:44	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 02:44	1
Sulfate	**2.84**		1.00	0.380	mg/L			11/14/20 02:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 21:04	1
Arsenic	**0.000529**	**J**	0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 21:04	1
Barium	**0.0116**		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 21:04	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 21:04	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 21:04	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 21:04	1
Calcium	**3.84**		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 21:04	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 21:04	1
Cobalt	**0.00102**	**J**	0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 21:04	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 21:04	1
Lithium	**0.0267**		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 21:04	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 21:04	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 21:04	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 21:04	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**40.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: BAW-5

Date Collected: 10/30/20 13:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-5

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.93**		1.00	0.320	mg/L			11/14/20 03:32	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 03:32	1
Sulfate	**4.76**		1.00	0.380	mg/L			11/14/20 03:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 21:07	1
Arsenic	**0.00130**		0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 21:07	1
Barium	**0.0428**		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 21:07	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 21:07	1
Boron	**0.194**		0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 21:07	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 21:07	1
Calcium	**16.4**		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 21:07	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 21:07	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 21:07	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 21:07	1

Client Sample ID: BAW-5

Date Collected: 10/30/20 13:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.194**		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 21:07	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 21:07	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 21:07	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 21:07	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**88.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: BAW-7

Date Collected: 11/02/20 15:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-6

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.91**		1.00	0.320	mg/L			11/14/20 03:48	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 03:48	1
Sulfate	**1.08**		1.00	0.380	mg/L			11/14/20 03:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 21:10	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 21:10	1
Barium	**0.0117**		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 21:10	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 21:10	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 21:10	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 21:10	1
Calcium	**0.535**		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 21:10	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 21:10	1
Cobalt	**0.000729**	**J**	0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 21:10	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 21:10	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 21:10	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 21:10	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 21:10	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 21:10	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**28.0**	**H**	10.0	10.0	mg/L			11/17/20 13:12	1

Client Sample ID: BAW-8

Date Collected: 11/02/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-7

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.19**		1.00	0.320	mg/L			11/14/20 04:04	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 04:04	1
Sulfate	**2.56**		1.00	0.380	mg/L			11/14/20 04:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:36	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:36	1
Barium	**0.0242**		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:36	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:36	1
Boron	**0.162**		0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:36	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:36	1
Calcium	**11.5**		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:36	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:36	1
Cobalt	**0.000192**	**J**	0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:36	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:36	1
Lithium	**0.130**		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:36	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:36	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:36	1
Thallium	**0.000333**	**J**	0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:36	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**78.0**		20.0	20.0	mg/L			11/09/20 17:15	1

Client Sample ID: BAW-9

Date Collected: 10/30/20 14:30
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-8

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.57**		1.00	0.320	mg/L			11/14/20 04:19	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 04:19	1
Sulfate	**2.83**		1.00	0.380	mg/L			11/14/20 04:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:39	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:39	1
Barium	**0.0214**		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:39	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:39	1
Boron	**0.160**		0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:39	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:39	1
Calcium	**10.2**		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:39	1
Chromium	**0.00357**		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:39	1
Cobalt	**0.000179**	**J**	0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:39	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:39	1

Client Sample ID: BAW-9

Date Collected: 10/30/20 14:30
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.123**		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:39	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:39	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:39	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:39	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**70.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: DUP-01

Date Collected: 10/30/20 08:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-9
Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.03**		1.00	0.320	mg/L			11/14/20 04:35	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 04:35	1
Sulfate	**3.64**		1.00	0.380	mg/L			11/14/20 04:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:42	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:42	1
Barium	**0.0338**		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:42	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:42	1
Boron	**0.0535**	**J**	0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:42	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:42	1
Calcium	**0.667**		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:42	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:42	1
Cobalt	**0.000950**	**J**	0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:42	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:42	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:42	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:42	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:42	1
Thallium	**0.000158**	**J**	0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:42	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**52.0**		20.0	20.0	mg/L			11/06/20 21:14	1

Client Sample ID: DUP-02

Date Collected: 11/02/20 09:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-10

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.03**		1.00	0.320	mg/L			11/14/20 04:51	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 04:51	1
Sulfate	**2.43**		1.00	0.380	mg/L			11/14/20 04:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:45	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:45	1
Barium	**0.0246**		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:45	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:45	1
Boron	**0.119**		0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:45	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:45	1
Calcium	**11.2**		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:45	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:45	1
Cobalt	**0.000156**	**J**	0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:45	1
Lead	**0.000134**	**J**	0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:45	1
Lithium	**0.131**		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:45	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:45	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:45	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:45	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**64.0**		20.0	20.0	mg/L			11/09/20 17:15	1

Client Sample ID: EB-01

Date Collected: 11/02/20 10:55
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-11

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			11/14/20 05:07	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 05:07	1
Sulfate	<0.380		1.00	0.380	mg/L			11/14/20 05:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:54	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:54	1
Barium	<0.00160		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:54	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:54	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:54	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:54	1
Calcium	<0.127		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:54	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:54	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:54	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:54	1

Client Sample ID: EB-01

Lab Sample ID: 180-113166-11

Date Collected: 11/02/20 10:55
Date Received: 11/04/20 09:00

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.00339		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:54	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:54	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:54	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:54	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:01	11/09/20 12:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0	H	10.0	10.0	mg/L			11/17/20 13:12	1

Client Sample ID: FB-01

Lab Sample ID: 180-113166-12

Date Collected: 10/30/20 09:15
Date Received: 11/04/20 09:00

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			11/14/20 05:23	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/14/20 05:23	1
Sulfate	<0.380		1.00	0.380	mg/L			11/14/20 05:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:57	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:57	1
Barium	<0.00160		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:57	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:57	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:57	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:57	1
Calcium	<0.127		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:57	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:57	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:57	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:57	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:57	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:57	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:57	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:57	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<20.0		20.0	20.0	mg/L			11/06/20 21:14	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-336986/53
Matrix: Water
Analysis Batch: 336986

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			11/13/20 20:24	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/13/20 20:24	1
Sulfate	<0.380		1.00	0.380	mg/L			11/13/20 20:24	1

Lab Sample ID: MB 180-336986/6
Matrix: Water
Analysis Batch: 336986

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.320		1.00	0.320	mg/L			11/13/20 06:08	1
Fluoride	<0.0440		0.100	0.0440	mg/L			11/13/20 06:08	1
Sulfate	<0.380		1.00	0.380	mg/L			11/13/20 06:08	1

Lab Sample ID: LCS 180-336986/5
Matrix: Water
Analysis Batch: 336986

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	49.27		mg/L		99	80 - 120
Fluoride	2.50	2.438		mg/L		98	80 - 120
Sulfate	50.0	49.46		mg/L		99	80 - 120

Lab Sample ID: LCS 180-336986/52
Matrix: Water
Analysis Batch: 336986

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	50.12		mg/L		100	80 - 120
Fluoride	2.50	2.448		mg/L		98	80 - 120
Sulfate	50.0	49.65		mg/L		99	80 - 120

Lab Sample ID: 180-113166-1 MS
Matrix: Water
Analysis Batch: 336986

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.55		50.0	54.80		mg/L		98	80 - 120
Fluoride	<0.0440		2.50	2.482		mg/L		99	80 - 120
Sulfate	0.910	J	50.0	50.22		mg/L		99	80 - 120

Lab Sample ID: 180-113166-1 MSD
Matrix: Water
Analysis Batch: 336986

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.55		50.0	54.90		mg/L		99	80 - 120	0	15
Fluoride	<0.0440		2.50	2.485		mg/L		99	80 - 120	0	15
Sulfate	0.910	J	50.0	50.35		mg/L		99	80 - 120	0	15

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-113166-2 MS
Matrix: Water
Analysis Batch: 336986

Client Sample ID: BAW-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.59		50.0	54.23		mg/L		93	80 - 120
Fluoride	<0.0440		2.50	2.357		mg/L		94	80 - 120
Sulfate	3.97		50.0	49.85		mg/L		92	80 - 120

Lab Sample ID: 180-113166-2 MSD
Matrix: Water
Analysis Batch: 336986

Client Sample ID: BAW-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	7.59		50.0	53.65		mg/L		92	80 - 120	1	15
Fluoride	<0.0440		2.50	2.324		mg/L		93	80 - 120	1	15
Sulfate	3.97		50.0	49.45		mg/L		91	80 - 120	1	15

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-336236/1-A
Matrix: Water
Analysis Batch: 337118

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 336236

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/06/20 14:43	11/13/20 17:30	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/06/20 14:43	11/13/20 17:30	1
Barium	<0.00160		0.0100	0.00160	mg/L		11/06/20 14:43	11/13/20 17:30	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/06/20 14:43	11/13/20 17:30	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/06/20 14:43	11/13/20 17:30	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/06/20 14:43	11/13/20 17:30	1
Calcium	<0.127		0.500	0.127	mg/L		11/06/20 14:43	11/13/20 17:30	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/06/20 14:43	11/13/20 17:30	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		11/06/20 14:43	11/13/20 17:30	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/06/20 14:43	11/13/20 17:30	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/06/20 14:43	11/13/20 17:30	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/06/20 14:43	11/13/20 17:30	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/06/20 14:43	11/13/20 17:30	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/06/20 14:43	11/13/20 17:30	1

Lab Sample ID: LCS 180-336236/2-A
Matrix: Water
Analysis Batch: 337118

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 336236

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.250	0.2500		mg/L		100	80 - 120
Arsenic	1.00	0.9866		mg/L		99	80 - 120
Barium	1.00	0.9728		mg/L		97	80 - 120
Beryllium	0.500	0.4816		mg/L		96	80 - 120
Boron	1.25	1.130		mg/L		90	80 - 120
Cadmium	0.500	0.4874		mg/L		97	80 - 120
Calcium	25.0	28.21		mg/L		113	80 - 120
Chromium	0.500	0.4918		mg/L		98	80 - 120
Cobalt	0.500	0.4980		mg/L		100	80 - 120

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

Lab Sample ID: LCS 180-336236/2-A
Matrix: Water
Analysis Batch: 337118

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 336236

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.500	0.5017		mg/L		100	80 - 120
Lithium	0.500	0.4921		mg/L		98	80 - 120
Molybdenum	0.500	0.5026		mg/L		101	80 - 120
Selenium	1.00	1.017		mg/L		102	80 - 120
Thallium	1.00	1.015		mg/L		102	80 - 120

Lab Sample ID: MB 180-336278/1-A
Matrix: Water
Analysis Batch: 337118

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 336278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.000378		0.00200	0.000378	mg/L		11/07/20 08:11	11/13/20 19:41	1
Arsenic	<0.000313		0.00100	0.000313	mg/L		11/07/20 08:11	11/13/20 19:41	1
Barium	<0.00160		0.0100	0.00160	mg/L		11/07/20 08:11	11/13/20 19:41	1
Beryllium	<0.000182		0.00250	0.000182	mg/L		11/07/20 08:11	11/13/20 19:41	1
Boron	<0.0386		0.0800	0.0386	mg/L		11/07/20 08:11	11/13/20 19:41	1
Cadmium	<0.000217		0.00250	0.000217	mg/L		11/07/20 08:11	11/13/20 19:41	1
Calcium	<0.127		0.500	0.127	mg/L		11/07/20 08:11	11/13/20 19:41	1
Chromium	<0.00153		0.00200	0.00153	mg/L		11/07/20 08:11	11/13/20 19:41	1
Cobalt	<0.000134		0.00250	0.000134	mg/L		11/07/20 08:11	11/13/20 19:41	1
Lead	<0.000128		0.00100	0.000128	mg/L		11/07/20 08:11	11/13/20 19:41	1
Lithium	<0.00339		0.00500	0.00339	mg/L		11/07/20 08:11	11/13/20 19:41	1
Molybdenum	<0.000610		0.0150	0.000610	mg/L		11/07/20 08:11	11/13/20 19:41	1
Selenium	<0.00151		0.00500	0.00151	mg/L		11/07/20 08:11	11/13/20 19:41	1
Thallium	<0.000148		0.00100	0.000148	mg/L		11/07/20 08:11	11/13/20 19:41	1

Lab Sample ID: LCS 180-336278/2-A
Matrix: Water
Analysis Batch: 337118

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 336278

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.250	0.2488		mg/L		100	80 - 120
Arsenic	1.00	0.9893		mg/L		99	80 - 120
Barium	1.00	0.9972		mg/L		100	80 - 120
Beryllium	0.500	0.4850		mg/L		97	80 - 120
Boron	1.25	1.213		mg/L		97	80 - 120
Cadmium	0.500	0.4924		mg/L		98	80 - 120
Calcium	25.0	28.62		mg/L		114	80 - 120
Chromium	0.500	0.4938		mg/L		99	80 - 120
Cobalt	0.500	0.5042		mg/L		101	80 - 120
Lead	0.500	0.5102		mg/L		102	80 - 120
Lithium	0.500	0.4999		mg/L		100	80 - 120
Molybdenum	0.500	0.5133		mg/L		103	80 - 120
Selenium	1.00	1.022		mg/L		102	80 - 120
Thallium	1.00	1.041		mg/L		104	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-336164/1-A
Matrix: Water
Analysis Batch: 336427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 336164

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:01	11/09/20 12:36	1

Lab Sample ID: LCS 180-336164/2-A
Matrix: Water
Analysis Batch: 336427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 336164

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.002600		mg/L		104	80 - 120

Lab Sample ID: 180-113166-11 MS
Matrix: Water
Analysis Batch: 336427

Client Sample ID: EB-01
Prep Type: Total/NA
Prep Batch: 336164

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000130		0.00100	0.001002		mg/L		100	75 - 125

Lab Sample ID: 180-113166-11 MSD
Matrix: Water
Analysis Batch: 336427

Client Sample ID: EB-01
Prep Type: Total/NA
Prep Batch: 336164

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000130		0.00100	0.001030		mg/L		103	75 - 125	3	20

Lab Sample ID: MB 180-336168/1-A
Matrix: Water
Analysis Batch: 336427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 336168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000130		0.000200	0.000130	mg/L		11/06/20 09:22	11/09/20 13:04	1

Lab Sample ID: LCS 180-336168/2-A
Matrix: Water
Analysis Batch: 336427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 336168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.002596		mg/L		104	80 - 120

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

Lab Sample ID: MB 180-336264/2
Matrix: Water
Analysis Batch: 336264

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	<10.0		10.0	10.0	mg/L			11/06/20 21:14	1

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

Lab Sample ID: LCS 180-336264/1
Matrix: Water
Analysis Batch: 336264

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	714	722.0		mg/L		101	80 - 120

Lab Sample ID: 180-113166-2 DU
Matrix: Water
Analysis Batch: 336264

Client Sample ID: BAW-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	48.0		48.00		mg/L		0	10

Lab Sample ID: MB 180-336451/2
Matrix: Water
Analysis Batch: 336451

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	<10.0		10.0	10.0	mg/L			11/09/20 17:15	1

Lab Sample ID: LCS 180-336451/1
Matrix: Water
Analysis Batch: 336451

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	714	700.0		mg/L		98	80 - 120

Lab Sample ID: MB 180-337422/2
Matrix: Water
Analysis Batch: 337422

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	<10.0		10.0	10.0	mg/L			11/17/20 13:12	1

Lab Sample ID: LCS 180-337422/1
Matrix: Water
Analysis Batch: 337422

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	357	349.0		mg/L		98	80 - 120

HPLC/IC

Analysis Batch: 336986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total/NA	Water	EPA 9056A	
180-113166-2	BAW-2A	Total/NA	Water	EPA 9056A	
180-113166-3	BAW-3	Total/NA	Water	EPA 9056A	
180-113166-4	BAW-4	Total/NA	Water	EPA 9056A	
180-113166-5	BAW-5	Total/NA	Water	EPA 9056A	
180-113166-6	BAW-7	Total/NA	Water	EPA 9056A	
180-113166-7	BAW-8	Total/NA	Water	EPA 9056A	
180-113166-8	BAW-9	Total/NA	Water	EPA 9056A	
180-113166-9	DUP-01	Total/NA	Water	EPA 9056A	
180-113166-10	DUP-02	Total/NA	Water	EPA 9056A	
180-113166-11	EB-01	Total/NA	Water	EPA 9056A	
180-113166-12	FB-01	Total/NA	Water	EPA 9056A	
MB 180-336986/53	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-336986/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-336986/5	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-336986/52	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-113166-1 MS	BAW-1	Total/NA	Water	EPA 9056A	
180-113166-1 MSD	BAW-1	Total/NA	Water	EPA 9056A	
180-113166-2 MS	BAW-2A	Total/NA	Water	EPA 9056A	
180-113166-2 MSD	BAW-2A	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 336164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-11	EB-01	Total/NA	Water	7470A	
MB 180-336164/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-336164/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-113166-11 MS	EB-01	Total/NA	Water	7470A	
180-113166-11 MSD	EB-01	Total/NA	Water	7470A	

Prep Batch: 336168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total/NA	Water	7470A	
180-113166-2	BAW-2A	Total/NA	Water	7470A	
180-113166-3	BAW-3	Total/NA	Water	7470A	
180-113166-4	BAW-4	Total/NA	Water	7470A	
180-113166-5	BAW-5	Total/NA	Water	7470A	
180-113166-6	BAW-7	Total/NA	Water	7470A	
180-113166-7	BAW-8	Total/NA	Water	7470A	
180-113166-8	BAW-9	Total/NA	Water	7470A	
180-113166-9	DUP-01	Total/NA	Water	7470A	
180-113166-10	DUP-02	Total/NA	Water	7470A	
180-113166-12	FB-01	Total/NA	Water	7470A	
MB 180-336168/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-336168/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 336236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-7	BAW-8	Total Recoverable	Water	3005A	
180-113166-8	BAW-9	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 336236 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-9	DUP-01	Total Recoverable	Water	3005A	
180-113166-10	DUP-02	Total Recoverable	Water	3005A	
180-113166-11	EB-01	Total Recoverable	Water	3005A	
180-113166-12	FB-01	Total Recoverable	Water	3005A	
MB 180-336236/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-336236/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 336278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total Recoverable	Water	3005A	
180-113166-2	BAW-2A	Total Recoverable	Water	3005A	
180-113166-3	BAW-3	Total Recoverable	Water	3005A	
180-113166-4	BAW-4	Total Recoverable	Water	3005A	
180-113166-5	BAW-5	Total Recoverable	Water	3005A	
180-113166-6	BAW-7	Total Recoverable	Water	3005A	
MB 180-336278/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-336278/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 336427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total/NA	Water	EPA 7470A	336168
180-113166-2	BAW-2A	Total/NA	Water	EPA 7470A	336168
180-113166-3	BAW-3	Total/NA	Water	EPA 7470A	336168
180-113166-4	BAW-4	Total/NA	Water	EPA 7470A	336168
180-113166-5	BAW-5	Total/NA	Water	EPA 7470A	336168
180-113166-6	BAW-7	Total/NA	Water	EPA 7470A	336168
180-113166-7	BAW-8	Total/NA	Water	EPA 7470A	336168
180-113166-8	BAW-9	Total/NA	Water	EPA 7470A	336168
180-113166-9	DUP-01	Total/NA	Water	EPA 7470A	336168
180-113166-10	DUP-02	Total/NA	Water	EPA 7470A	336168
180-113166-11	EB-01	Total/NA	Water	EPA 7470A	336164
180-113166-12	FB-01	Total/NA	Water	EPA 7470A	336168
MB 180-336164/1-A	Method Blank	Total/NA	Water	EPA 7470A	336164
MB 180-336168/1-A	Method Blank	Total/NA	Water	EPA 7470A	336168
LCS 180-336164/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	336164
LCS 180-336168/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	336168
180-113166-11 MS	EB-01	Total/NA	Water	EPA 7470A	336164
180-113166-11 MSD	EB-01	Total/NA	Water	EPA 7470A	336164

Analysis Batch: 337118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total Recoverable	Water	EPA 6020B	336278
180-113166-2	BAW-2A	Total Recoverable	Water	EPA 6020B	336278
180-113166-3	BAW-3	Total Recoverable	Water	EPA 6020B	336278
180-113166-4	BAW-4	Total Recoverable	Water	EPA 6020B	336278
180-113166-5	BAW-5	Total Recoverable	Water	EPA 6020B	336278
180-113166-6	BAW-7	Total Recoverable	Water	EPA 6020B	336278
180-113166-7	BAW-8	Total Recoverable	Water	EPA 6020B	336236
180-113166-8	BAW-9	Total Recoverable	Water	EPA 6020B	336236
180-113166-9	DUP-01	Total Recoverable	Water	EPA 6020B	336236
180-113166-10	DUP-02	Total Recoverable	Water	EPA 6020B	336236

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-1

Metals (Continued)

Analysis Batch: 337118 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-11	EB-01	Total Recoverable	Water	EPA 6020B	336236
180-113166-12	FB-01	Total Recoverable	Water	EPA 6020B	336236
MB 180-336236/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	336236
MB 180-336278/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	336278
LCS 180-336236/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	336236
LCS 180-336278/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	336278

General Chemistry

Analysis Batch: 336264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total/NA	Water	SM 2540C	
180-113166-2	BAW-2A	Total/NA	Water	SM 2540C	
180-113166-3	BAW-3	Total/NA	Water	SM 2540C	
180-113166-4	BAW-4	Total/NA	Water	SM 2540C	
180-113166-5	BAW-5	Total/NA	Water	SM 2540C	
180-113166-8	BAW-9	Total/NA	Water	SM 2540C	
180-113166-9	DUP-01	Total/NA	Water	SM 2540C	
180-113166-12	FB-01	Total/NA	Water	SM 2540C	
MB 180-336264/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-336264/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-113166-2 DU	BAW-2A	Total/NA	Water	SM 2540C	

Analysis Batch: 336451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-7	BAW-8	Total/NA	Water	SM 2540C	
180-113166-10	DUP-02	Total/NA	Water	SM 2540C	
MB 180-336451/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-336451/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 337422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-6	BAW-7	Total/NA	Water	SM 2540C	
180-113166-11	EB-01	Total/NA	Water	SM 2540C	
MB 180-337422/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-337422/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

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Client Information	Sampler: Philip Evans	Lab PM: Brown, Shali	Carrier Tracking No(s):
Client Contact: SCS Contacts	Phone: 850-336-0192	E-Mail: shali.brown@eurofinset.com	COC No:
Company: SCS			Page: 1 of 2
Address: 3535 Colonnade Pkwy Bin S 530 EC	Due Date Requested:		Job #:
City: Birmingham	TAT Requested (days):		
State, Zip: AL, 35243			
Phone: 205-992-6283	PO #:		
Email: SCS Contacts	WO #:		
Project Name: CCR Plant Daniel	Project #: 18020047		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Appendix III	Appendix IV	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X			X	
BAW-1	10/30/20	0910	G	W			X	X		
BAW-2A	↓	0950	↓	↓			↓	↓		
BAW-3	↓	1045	↓	↓			↓	↓		
BAW-4	↓	1220	↓	↓			↓	↓		
BAW-5	10/30/20	1345	↓	↓			↓	↓		
BAW-7	11/2/20	1550	↓	↓			↓	↓		
BAW-8	11/2/20	1045	↓	↓			↓	↓		
BAW-9	10/30/20	1430	↓	↓			↓	↓		
DUP-01	10/30/20	0850	↓	↓			↓	↓		
DUP-02	11/2/20	0945	↓	↓			↓	↓		
EB-01	11/2/20	1055	G	W			X	X		

180-113166 Chain of Custody

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	11/3/20 1000	RDH	Deulne Kates	11-4-20 9:00	ETA PITT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

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Client Information	Sampler: Philip Evans	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No:
Client Contact: SCS Contacts	Phone: 850-336-0192	E-Mail: shali.brown@eurofinset.com		Page: 2 of 2
Company: SCS				Job #:

Address: 3535 Colonnade Pkwy Bin S 530 EC	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Birmingham	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, 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)
State, Zip: AL, 35243			
Phone: 205-992-6283	PO #:		Other:
Email: SCS Contacts	WO #:		
Project Name: CCR Plant Daniel	Project #: 18020047		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Appendix III	Appendix IV	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FB-01	10/30/20	0915	G	W			X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	11/3/20 1000	RPH		11-4-20 9:00	FTAPIT
Relinquished by:					
Relinquished by:					

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019


WED - 04 NOV 10:30A
PRIORITY OVERNIGHT
2 of 3
3985 1469 5324
3985 1469 5313
XH AGCA
15238 PIT
PA-US
3 of 3
MPS# 3985 1469 5335
Mstr# 3985 1469 5313
Uncorrected temp
Thermometer ID
Initials
PT-WI-SR-001 effective 7/26/13
ORIGIN ID:BIXA (850) 336-0192
RDH ENVIRONMENTAL
5720 DOVE DR
PACE, FL 32571
UNITED STATES US
SHIP DATE: 03NOV20
TO TEST AMERICA
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
180-113166 Waybill
Do Not Lift Using This Tag

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No: 180-417765.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Shali.Brown@Eurofinset.com	State of Origin: Mississippi	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-113166-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/16/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR - Plant Daniel Ash Pond B	Project #: 18020047			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 Radium 226	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAW-1 (180-113166-1)	10/30/20	09:10 Central		Water			X	X	X	1	
BAW-2A (180-113166-2)	10/30/20	09:50 Central		Water			X	X	X	1	
BAW-3 (180-113166-3)	10/30/20	10:45 Central		Water			X	X	X	1	
BAW-4 (180-113166-4)	10/30/20	12:20 Central		Water			X	X	X	1	
BAW-5 (180-113166-5)	10/30/20	13:45 Central		Water			X	X	X	1	
BAW-7 (180-113166-6)	11/2/20	15:50 Central		Water			X	X	X	1	
BAW-8 (180-113166-7)	11/2/20	10:45 Central		Water			X	X	X	1	
BAW-9 (180-113166-8)	10/30/20	14:30 Central		Water			X	X	X	1	
DUP-01 (180-113166-9)	10/30/20	08:50 Central		Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	11/05/20 1700	ETA PIT	FED EX		
2	FED EX			[signature]	NOV 06 2020 08:42	ETA STL
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No: 180-417765.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Shali.Brown@Eurofinset.com	State of Origin: Mississippi	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-113166-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/16/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR - Plant Daniel Ash Pond B	Project #: 18020047			
Site:	SSOW#:			

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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 Radium 226	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
DUP-02 (180-113166-10)	11/2/20	09:45 Central		Water			X	X	X	1	
EB-01 (180-113166-11)	11/2/20	10:55 Central		Water			X	X	X	1	
FB-01 (180-113166-12)	10/30/20	09:15 Central		Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 11/05/20 1700	Company: ETA PM	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by:	Date/Time: NOV 06 2020 05:45	Company: ETA SR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-113166-1

Login Number: 113166
List Number: 1
Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

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	
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	

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-113166-2
Client Project/Site: CCR - Plant Daniel Ash Pond B

For:
Southern Company
3535 Colonnade Parkway
Bin S 530 EC
Birmingham, Alabama 35243

Attn: Lauren Parker

Authorized for release by:
1/11/2021 4:35:48 PM

Shali Brown, Project Manager II
(615)301-5031
Shali.Brown@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Job ID: 180-113166-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-113166-2

Comments
No additional comments.

Receipt
The samples were received on 11/4/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.6º C, 2.9º C and 3.4º C.

RAD
Methods 903.0, 9315: 903/9315 160-488672
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. BAW-1 (180-113166-1), BAW-2A (180-113166-2), BAW-3 (180-113166-3), BAW-4 (180-113166-4), BAW-5 (180-113166-5), BAW-7 (180-113166-6), BAW-8 (180-113166-7), BAW-9 (180-113166-8), DUP-01 (180-113166-9), DUP-02 (180-113166-10), EB-01 (180-113166-11), FB-01 (180-113166-12), (LCS 160-488672/1-A), (LCSD 160-488672/2-A) and (MB 160-488672/19-A)

Methods 904.0, 9320: 9320/904 160-488673 and 160-488673
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. BAW-1 (180-113166-1), BAW-2A (180-113166-2), BAW-3 (180-113166-3), BAW-4 (180-113166-4), BAW-5 (180-113166-5), BAW-7 (180-113166-6), BAW-8 (180-113166-7), BAW-9 (180-113166-8), DUP-01 (180-113166-9), DUP-02 (180-113166-10), EB-01 (180-113166-11) and FB-01 (180-113166-12)

Method PrecSep_0: Radium 228 Prep Batch 160-488673:
Insufficient sample volume was available to perform a sample duplicate for the following samples: BAW-1 (180-113166-1), BAW-2A (180-113166-2), BAW-3 (180-113166-3), BAW-4 (180-113166-4), BAW-5 (180-113166-5), BAW-7 (180-113166-6), BAW-8 (180-113166-7), BAW-9 (180-113166-8), DUP-01 (180-113166-9), DUP-02 (180-113166-10), EB-01 (180-113166-11) and FB-01 (180-113166-12). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-488672:
Insufficient sample volume was available to perform a sample duplicate for the following samples: BAW-1 (180-113166-1), BAW-2A (180-113166-2), BAW-3 (180-113166-3), BAW-4 (180-113166-4), BAW-5 (180-113166-5), BAW-7 (180-113166-6), BAW-8 (180-113166-7), BAW-9 (180-113166-8), DUP-01 (180-113166-9), DUP-02 (180-113166-10), EB-01 (180-113166-11) and FB-01 (180-113166-12). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Job ID: 180-113166-2
Project/Site: CCR - Plant Daniel Ash Pond B

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Southern Company
Job ID: 180-113166-2
Project/Site: CCR - Plant Daniel Ash Pond B

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-21
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21
Kentucky (DW)	State	KY90125	12-31-20 *
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-113166-1	BAW-1	Water	10/30/20 09:10	11/04/20 09:00	
180-113166-2	BAW-2A	Water	10/30/20 09:50	11/04/20 09:00	
180-113166-3	BAW-3	Water	10/30/20 10:45	11/04/20 09:00	
180-113166-4	BAW-4	Water	10/30/20 12:20	11/04/20 09:00	
180-113166-5	BAW-5	Water	10/30/20 13:45	11/04/20 09:00	
180-113166-6	BAW-7	Water	11/02/20 15:50	11/04/20 09:00	
180-113166-7	BAW-8	Water	11/02/20 10:45	11/04/20 09:00	
180-113166-8	BAW-9	Water	10/30/20 14:30	11/04/20 09:00	
180-113166-9	DUP-01	Water	10/30/20 08:50	11/04/20 09:00	
180-113166-10	DUP-02	Water	11/02/20 09:45	11/04/20 09:00	
180-113166-11	EB-01	Water	11/02/20 10:55	11/04/20 09:00	
180-113166-12	FB-01	Water	10/30/20 09:15	11/04/20 09:00	

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

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

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Client Sample ID: BAW-1
Date Collected: 10/30/20 09:10
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.37 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:35	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.37 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:24	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-2A
Date Collected: 10/30/20 09:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.23 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:35	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.23 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:25	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-3
Date Collected: 10/30/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.24 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:37	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			999.24 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:25	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-4
Date Collected: 10/30/20 12:20
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.46 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:37	SCB	TAL SL
	Instrument ID: GFPCRED									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Client Sample ID: BAW-4
Date Collected: 10/30/20 12:20
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			999.46 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:25	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-5
Date Collected: 10/30/20 13:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.26 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:37	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.26 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:25	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-7
Date Collected: 11/02/20 15:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.32 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:37	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			999.32 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:25	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: BAW-8
Date Collected: 11/02/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.29 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:39	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.29 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:26	FLC	TAL SL
	Instrument ID: GFPCBLUE									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Client Sample ID: BAW-8
Date Collected: 11/02/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-7
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	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL

Client Sample ID: BAW-9
Date Collected: 10/30/20 14:30
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.59 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:40	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			999.59 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:26	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01
Date Collected: 10/30/20 08:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.45 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:40	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.45 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:26	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-02
Date Collected: 11/02/20 09:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.64 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 18:40	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			999.64 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:26	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Client Sample ID: EB-01

Date Collected: 11/02/20 10:55
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.46 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 21:03	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.46 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:26	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Client Sample ID: FB-01

Date Collected: 10/30/20 09:15
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.15 mL	1.0 g	488672	11/10/20 08:35	AVB	TAL SL
Total/NA	Analysis	9315		1			494126	01/06/21 21:03	SCB	TAL SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			1000.15 mL	1.0 g	488673	11/10/20 08:53	AVB	TAL SL
Total/NA	Analysis	9320		1			494114	01/06/21 13:23	FLC	TAL SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			494575	01/11/21 13:46	GRW	TAL SL
	Instrument ID: NOEQUIP									

Laboratory References:

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

Analyst References:

Lab: TAL SL

Batch Type: Prep

AVB = Amber Bleem

Batch Type: Analysis

FLC = Fernando Cruz

GRW = George Witt

SCB = Sarah Bernsen

Client Sample ID: BAW-1

Date Collected: 10/30/20 09:10
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-1

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	0.423		0.244	0.246	1.00	0.306	pCi/L	11/10/20 08:35	01/06/21 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.0*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0737	U	0.211	0.211	1.00	0.367	pCi/L	11/10/20 08:53	01/06/21 13:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.0*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:24*	*1*
Y Carrier	*101*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:24*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.497		0.323	0.324	5.00	0.367	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-2A

Date Collected: 10/30/20 09:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-2

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	0.307	U	0.294	0.295	1.00	0.461	pCi/L	11/10/20 08:35	01/06/21 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.9*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.714		0.319	0.326	1.00	0.456	pCi/L	11/10/20 08:53	01/06/21 13:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.9*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*
Y Carrier	*99.4*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*

Client Sample ID: BAW-2A
Date Collected: 10/30/20 09:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-2
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	**1.02**		0.434	0.440	5.00	0.461	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-3
Date Collected: 10/30/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-3
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	0.170	U	0.193	0.194	1.00	0.309	pCi/L	11/10/20 08:35	01/06/21 18:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.3*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.315	U	0.224	0.226	1.00	0.349	pCi/L	11/10/20 08:53	01/06/21 13:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.3*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*
Y Carrier	*101*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*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	**0.485**		0.296	0.298	5.00	0.349	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-4
Date Collected: 10/30/20 12:20
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-4
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	0.137	U	0.165	0.165	1.00	0.269	pCi/L	11/10/20 08:35	01/06/21 18:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.1*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:37*	*1*

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Client Sample ID: BAW-4

Date Collected: 10/30/20 12:20
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-4
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.207	U	0.211	0.212	1.00	0.343	pCi/L	11/10/20 08:53	01/06/21 13:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.1*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*
Y Carrier	*98.7*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.344**		0.268	0.269	5.00	0.343	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-5

Date Collected: 10/30/20 13:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-5
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	**0.429**		0.235	0.238	1.00	0.287	pCi/L	11/10/20 08:35	01/06/21 18:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.1*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0988	U	0.200	0.200	1.00	0.342	pCi/L	11/10/20 08:53	01/06/21 13:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.1*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*
Y Carrier	*97.2*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*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	**0.528**		0.309	0.311	5.00	0.342	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-7

Date Collected: 11/02/20 15:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-6

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	0.324		0.204	0.206	1.00	0.260	pCi/L	11/10/20 08:35	01/06/21 18:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.1*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.211	U	0.214	0.215	1.00	0.349	pCi/L	11/10/20 08:53	01/06/21 13:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.1*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*1*
Y Carrier	*102*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:25*	*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	0.535		0.296	0.298	5.00	0.349	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-8

Date Collected: 11/02/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-7

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	0.140	U	0.176	0.176	1.00	0.291	pCi/L	11/10/20 08:35	01/06/21 18:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.5*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:39*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0570	U	0.224	0.224	1.00	0.410	pCi/L	11/10/20 08:53	01/06/21 13:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.5*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*1*
Y Carrier	*101*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*1*

Client Sample ID: BAW-8
Date Collected: 11/02/20 10:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-7
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0826	U	0.285	0.285	5.00	0.410	pCi/L		01/11/21 13:46	1

Client Sample ID: BAW-9
Date Collected: 10/30/20 14:30
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-8
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	**0.389**		0.245	0.248	1.00	0.327	pCi/L	11/10/20 08:35	01/06/21 18:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:40*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.479**		0.232	0.236	1.00	0.334	pCi/L	11/10/20 08:53	01/06/21 13:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*1*
Y Carrier	*101*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*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	**0.868**		0.337	0.342	5.00	0.334	pCi/L		01/11/21 13:46	1

Client Sample ID: DUP-01
Date Collected: 10/30/20 08:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-9
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	0.257	U	0.219	0.220	1.00	0.328	pCi/L	11/10/20 08:35	01/06/21 18:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:40*	*1*

Client Sample ID: DUP-01

Date Collected: 10/30/20 08:50
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-9
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.262	U	0.220	0.221	1.00	0.350	pCi/L	11/10/20 08:53	01/06/21 13:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*1*
Y Carrier	*103*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*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	**0.519**		0.310	0.312	5.00	0.350	pCi/L		01/11/21 13:46	1

Client Sample ID: DUP-02

Date Collected: 11/02/20 09:45
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-10
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	0.219	U	0.215	0.216	1.00	0.336	pCi/L	11/10/20 08:35	01/06/21 18:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*11/10/20 08:35*	*01/06/21 18:40*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0434	U	0.236	0.236	1.00	0.412	pCi/L	11/10/20 08:53	01/06/21 13:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*1*
Y Carrier	*101*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*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	0.262	U	0.319	0.320	5.00	0.412	pCi/L		01/11/21 13:46	1

Client Sample ID: EB-01

Date Collected: 11/02/20 10:55
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-11

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	0.123	U	0.161	0.161	1.00	0.268	pCi/L	11/10/20 08:35	01/06/21 21:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*40 - 110*	*11/10/20 08:35*	*01/06/21 21:03*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.145	U	0.198	0.198	1.00	0.375	pCi/L	11/10/20 08:53	01/06/21 13:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*1*
Y Carrier	*107*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:26*	*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	-0.0224	U	0.255	0.255	5.00	0.375	pCi/L		01/11/21 13:46	1

Client Sample ID: FB-01

Date Collected: 10/30/20 09:15
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-12

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	0.0233	U	0.188	0.188	1.00	0.364	pCi/L	11/10/20 08:35	01/06/21 21:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*40 - 110*	*11/10/20 08:35*	*01/06/21 21:03*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.261	U	0.260	0.261	1.00	0.423	pCi/L	11/10/20 08:53	01/06/21 13:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:23*	*1*
Y Carrier	*103*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:23*	*1*

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Client Sample ID: FB-01

Date Collected: 10/30/20 09:15
Date Received: 11/04/20 09:00

Lab Sample ID: 180-113166-12

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	0.285	U	0.321	0.322	5.00	0.423	pCi/L		01/11/21 13:46	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-488672/19-A
Matrix: Water
Analysis Batch: 494126

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488672

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1091	U	0.166	0.166	1.00	0.286	pCi/L	11/10/20 08:35	01/06/21 21:04	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*11/10/20 08:35*	*01/06/21 21:04*	*1*

Lab Sample ID: LCS 160-488672/1-A
Matrix: Water
Analysis Batch: 494260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488672

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	10.63		1.28	1.00	0.284	pCi/L	94	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.6*		*40 - 110*

Lab Sample ID: LCSD 160-488672/2-A
Matrix: Water
Analysis Batch: 494260

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 488672

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	11.50		1.35	1.00	0.265	pCi/L	101	75 - 125	0.33	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*90.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-488673/19-A
Matrix: Water
Analysis Batch: 494113

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488673

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1897	U	0.197	0.198	1.00	0.320	pCi/L	11/10/20 08:53	01/06/21 13:29	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:29*	*1*
Y Carrier	*91.6*		*40 - 110*	*11/10/20 08:53*	*01/06/21 13:29*	*1*

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

Lab Sample ID: LCS 160-488673/1-A
Matrix: Water
Analysis Batch: 494114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488673

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.52	7.527		0.922	1.00	0.395	pCi/L	100	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.6*		*40 - 110*
Y Carrier	*95.3*		*40 - 110*

Lab Sample ID: LCSD 160-488673/2-A
Matrix: Water
Analysis Batch: 494114

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 488673

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.52	6.431		0.815	1.00	0.396	pCi/L	85	75 - 125	0.63	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*90.3*		*40 - 110*
Y Carrier	*98.7*		*40 - 110*

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Daniel Ash Pond B

Job ID: 180-113166-2

Rad

Prep Batch: 488672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total/NA	Water	PrecSep-21	
180-113166-2	BAW-2A	Total/NA	Water	PrecSep-21	
180-113166-3	BAW-3	Total/NA	Water	PrecSep-21	
180-113166-4	BAW-4	Total/NA	Water	PrecSep-21	
180-113166-5	BAW-5	Total/NA	Water	PrecSep-21	
180-113166-6	BAW-7	Total/NA	Water	PrecSep-21	
180-113166-7	BAW-8	Total/NA	Water	PrecSep-21	
180-113166-8	BAW-9	Total/NA	Water	PrecSep-21	
180-113166-9	DUP-01	Total/NA	Water	PrecSep-21	
180-113166-10	DUP-02	Total/NA	Water	PrecSep-21	
180-113166-11	EB-01	Total/NA	Water	PrecSep-21	
180-113166-12	FB-01	Total/NA	Water	PrecSep-21	
MB 160-488672/19-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-488672/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-488672/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 488673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113166-1	BAW-1	Total/NA	Water	PrecSep_0	
180-113166-2	BAW-2A	Total/NA	Water	PrecSep_0	
180-113166-3	BAW-3	Total/NA	Water	PrecSep_0	
180-113166-4	BAW-4	Total/NA	Water	PrecSep_0	
180-113166-5	BAW-5	Total/NA	Water	PrecSep_0	
180-113166-6	BAW-7	Total/NA	Water	PrecSep_0	
180-113166-7	BAW-8	Total/NA	Water	PrecSep_0	
180-113166-8	BAW-9	Total/NA	Water	PrecSep_0	
180-113166-9	DUP-01	Total/NA	Water	PrecSep_0	
180-113166-10	DUP-02	Total/NA	Water	PrecSep_0	
180-113166-11	EB-01	Total/NA	Water	PrecSep_0	
180-113166-12	FB-01	Total/NA	Water	PrecSep_0	
MB 160-488673/19-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-488673/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-488673/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Philip Evans	Lab PM: Brown, Shali	Carrier Tracking No(s):
Client Contact: SCS Contacts	Phone: 850-336-0192	E-Mail: shali.brown@eurofinset.com	COC No:
Company: SCS			Page: 1 of 2
			Job #:
Address: 3535 Colonnade Pkwy Bin S 530 EC	Due Date Requested:		
City: Birmingham	TAT Requested (days):		
State, Zip: AL, 35243			
Phone: 205-992-6283	PO #:		
Email: SCS Contacts	WO #:		
Project Name: CCR Plant Daniel	Project #: 18020047		
Site:	SSOW#:		

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
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Appendix III	Appendix IV	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
BAW-1	10/30/20	0910	G	W			X	X		180-113166 Chain of Custody
BAW-2A	↓	0950	↓	↓			↓	↓		
BAW-3	↓	1045	↓	↓			↓	↓		
BAW-4	↓	1220	↓	↓			↓	↓		
BAW-5	10/30/20	1345	↓	↓			↓	↓		
BAW-7	11/2/20	1550	↓	↓			↓	↓		
BAW-8	11/2/20	1045	↓	↓			↓	↓		
BAW-9	10/30/20	1430	↓	↓			↓	↓		
DUP-01	10/30/20	0850	↓	↓			↓	↓		
DUP-02	11/2/20	0945	↓	↓			↓	↓		
EB-01	11/2/20	1055	G	W			X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: [signature]	Date/Time: 11/3/20 1000	Company: RDH	Received by: [signature]	Date/Time: 11-4-20 9:00	Company: ETA PITT
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Philip Evans	Lab PM: Brown, Shali	Carrier Tracking No(s):	COC No:
Client Contact: SCS Contacts	Phone: 850-336-0192	E-Mail: shali.brown@eurofinset.com		Page: 2 of 2
Company: SCS				Job #:

Address: 3535 Colonnade Pkwy Bin S 530 EC	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Birmingham	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, 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)
State, Zip: AL, 35243			Other:
Phone: 205-992-6283	PO #:		
Email: SCS Contacts	WO #:		
Project Name: CCR Plant Daniel	Project #: 18020047		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Appendix III	Appendix IV	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
FB-01	10/30/20	0915	G	W			X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		11/3/20 1000	RPH		11-4-20 9:00	FTAPIT
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019


WED - 04 NOV 10:30A
PRIORITY OVERNIGHT
2 of 3
3985 1469 5324
3 of 3
3985 1469 5335
Mstr# 3985 1469 5313
XH AGCA
15238 PIT
PA-US
Uncorrected temp
Thermometer ID
Initials
PT-WI-SR-001 effective 7/26/13
FedEx Express
180-113166 Waybill
ORIGIN ID:BIXA (850) 336-0192
RDH ENVIRONMENTAL
5720 DOVE DR
PACE, FL 32571
UNITED STATES US
TO TEST AMERICA
301 ALPHA DR
(412) 963-7058
Do Not Lift Using This Tag

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-113166-2

Login Number: 113166
List Number: 1
Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

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	
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	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-113166-2

Login Number: 113166
List Number: 2
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 11/06/20 03:45 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.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Product Name: Low-Flow System

Date: 2020-10-30 09:11:49

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	67 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	58.1 ft

Well Information:		Pumping Information:	
Well ID	BAW-1	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7790493 L
Well Total Depth	60.6 ft	Calculated Sample Rate	300 sec
Screen Length	5 ft	Stabilization Drawdown	0.36 in
Depth to Water	23.52 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:53:44	300.10	20.97	4.99	36.69	0.68	23.55	5.24	100.20
Last 5	08:58:44	600.02	21.19	4.96	35.22	0.67	23.55	5.22	105.41
Last 5	09:03:44	900.02	21.17	4.99	34.47	0.65	23.55	5.22	106.03
Last 5	09:08:44	1200.02	21.24	5.00	34.18	0.60	23.55	5.24	106.10
Last 5									
Variance 0			0.22	-0.02	-1.47			-0.01	5.20
Variance 1			-0.02	0.02	-0.75			-0.00	0.62
Variance 2			0.07	0.01	-0.29			0.02	0.07

Notes

Sample time @ 0910. Cloudy 55. FB-01@ 0915.

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-30 09:53:30

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	62.2 ft

Well Information:		Pumping Information:	
Well ID	BAW-2A	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7924396 L
Well Total Depth	67.2 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.12 in
Depth to Water	32.88 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:33:42	300.02	20.66	4.87	46.06	2.85	32.89	3.06	111.33
Last 5	09:38:42	600.02	20.75	4.86	45.57	2.30	32.89	2.98	106.72
Last 5	09:43:42	900.02	20.84	4.86	45.41	1.56	32.89	2.99	104.48
Last 5	09:48:42	1200.02	20.75	4.87	44.78	0.98	32.89	2.91	103.14
Last 5									
Variance 0			0.09	-0.01	-0.49			-0.08	-4.62
Variance 1			0.09	0.00	-0.17			0.01	-2.24
Variance 2			-0.09	0.01	-0.63			-0.08	-1.34

Notes

Sample time @ 0950. Cloudy 57. DUP-01@ fake time 0850.

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-30 10:43:59

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	63.4 ft

Well Information:		Pumping Information:	
Well ID	BAW-3	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7924396 L
Well Total Depth	68.4 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	32.55 ft	Total Volume Pumped	10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:21:41	300.02	20.93	4.83	47.85	3.68	32.57	0.35	117.73
Last 5	10:26:41	600.02	21.11	4.83	47.71	2.88	32.57	0.27	104.52
Last 5	10:31:42	901.02	21.23	4.81	47.85	2.52	32.57	0.27	98.51
Last 5	10:36:42	1201.02	21.37	4.81	47.95	1.75	32.57	0.26	94.82
Last 5	10:41:42	1501.02	21.38	4.80	48.12	1.61	32.57	0.26	92.31
Variance 0			0.12	-0.02	0.14			-0.01	-6.01
Variance 1			0.14	-0.00	0.10			-0.00	-3.70
Variance 2			0.02	-0.01	0.17			-0.01	-2.51

Notes

Sample time @ 1045. Cloudy 60.

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-30 12:17:46

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	75 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	64.9 ft

Well Information:		Pumping Information:	
Well ID	BAW-4	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.8147567 L
Well Total Depth	69.9 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	29.93 ft	Total Volume Pumped	28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:56:01	3002.02	21.10	5.33	45.69	1.55	29.97	0.20	-83.08
Last 5	12:01:01	3302.02	20.52	5.33	45.32	1.52	29.97	0.20	-84.88
Last 5	12:06:01	3602.02	20.26	5.33	45.39	1.54	29.97	0.20	-86.55
Last 5	12:11:01	3902.02	20.31	5.33	45.49	1.50	29.97	0.20	-88.35
Last 5	12:16:04	4205.03	20.21	5.32	45.52	1.47	29.97	0.20	-89.80
Variance 0			-0.26	-0.00	0.07			0.00	-1.67
Variance 1			0.05	-0.00	0.10			-0.00	-1.80
Variance 2			-0.09	-0.00	0.03			0.00	-1.46

Notes

Sample time @ 1220. PC 64.

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-30 13:41:42

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	72 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	64.1 ft

Well Information:		Pumping Information:	
Well ID	BAW-5	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.8013664 L
Well Total Depth	69.1 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.24 in
Depth to Water	33.35 ft	Total Volume Pumped	22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:19:49	2101.02	21.02	6.19	112.15	2.14	33.37	0.14	-171.22
Last 5	13:24:50	2402.02	20.97	6.19	111.66	2.02	33.37	0.15	-169.62
Last 5	13:29:51	2703.02	21.02	6.19	111.96	1.99	33.37	0.14	-168.66
Last 5	13:34:52	3004.02	21.05	6.19	112.22	1.94	33.37	0.14	-167.86
Last 5	13:39:54	3306.02	20.99	6.19	112.18	1.90	33.37	0.15	-167.01
Variance 0			0.04	-0.00	0.30			-0.00	0.95
Variance 1			0.03	0.00	0.27			0.00	0.81
Variance 2			-0.06	0.00	-0.04			0.00	0.85

Notes

Sample time @ 1345. PC 65.

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-30 14:28:17

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	58.15 ft

Well Information:		Pumping Information:	
Well ID	BAW-9	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5324396 L
Well Total Depth	63.15 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.96 in
Depth to Water	32.52 ft	Total Volume Pumped	8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:10:38	300.02	24.20	5.86	79.90	1.75	32.60	0.25	-144.82
Last 5	14:15:38	600.02	24.29	5.85	79.56	1.30	32.60	0.20	-147.94
Last 5	14:20:38	900.02	24.30	5.86	79.62	0.84	32.60	0.18	-150.20
Last 5	14:25:38	1200.02	24.34	5.85	79.53	0.58	32.60	0.18	-150.66
Last 5									
Variance 0			0.09	-0.00	-0.33			-0.05	-3.12
Variance 1			0.02	0.00	0.06			-0.02	-2.25
Variance 2			0.04	-0.00	-0.09			-0.00	-0.46

Notes

Sample time @ 1430. Sunny 70.

Grab Samples

Product Name: Low-Flow System

Date: 2020-11-02 10:43:45

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	BP
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	70 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	63.7 ft

Well Information:		Pumping Information:	
Well ID	BAW-8	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.5324396 L
Well Total Depth	68.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.48 in
Depth to Water	33.30 ft	Total Volume Pumped	12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:19:48	600.03	23.34	5.82	84.44	0.86	33.34	0.15	-103.17
Last 5	10:24:48	900.03	23.38	5.82	84.65	0.53	33.34	0.13	-119.53
Last 5	10:29:48	1200.03	23.43	5.83	84.95	0.48	33.34	0.12	-134.14
Last 5	10:34:48	1500.03	23.52	5.83	85.07	0.42	33.34	0.12	-141.15
Last 5	10:39:48	1800.03	23.61	5.83	85.15	0.34	33.34	0.11	-143.06
Variance 0			0.04	0.00	0.30			-0.01	-14.61
Variance 1			0.09	0.00	0.12			0.00	-7.01
Variance 2			0.09	0.00	0.08			-0.00	-1.91

Notes

Sample time @ 1045. Sunny 60. DUP-02@ fake time 0945. EB-01@ 1055.

Grab Samples

Product Name: Low-Flow System

Date: 2020-11-02 15:48:28

Project Information:		Pump Information:	
Operator Name	Philip Evans	Pump Model/Type	QED
Company Name	RDH Environmental	Tubing Type	PE
Project Name	Daniel BAW CCR	Tubing Diameter	.17 in
Site Name	Daniel	Tubing Length	60 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	417744		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	51 ft

Well Information:		Pumping Information:	
Well ID	BAW-7	Final Pumping Rate	400 mL/min
Well diameter	2 in	Total System Volume	0.7478054 L
Well Total Depth	56 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0.72 in
Depth to Water	26.87 ft	Total Volume Pumped	100 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:26:00	13838.04	21.68	4.92	32.88	4.97	26.93	5.29	121.57
Last 5	15:31:00	14138.03	21.68	4.92	32.85	4.94	26.93	5.22	120.42
Last 5	15:36:00	14438.03	21.64	4.91	32.91	4.90	26.93	5.21	119.66
Last 5	15:41:04	14742.03	21.64	4.92	32.89	4.88	26.93	5.22	117.35
Last 5	15:46:04	15042.03	21.65	4.92	32.90	4.85	26.93	5.23	116.62
Variance 0			-0.04	-0.01	0.06			-0.01	-0.77
Variance 1			-0.00	0.01	-0.02			0.01	-2.30
Variance 2			0.01	-0.00	0.01			0.01	-0.73

Notes

Sample time @ 1550. Sunny 60.

Grab Samples

Appendix B

GROUNDWATER STATS CONSULTING

January 22, 2021

Southern Company Services
Attn: Ms. Lauren Parker
3535 Colonnade Parkway
Birmingham, AL 35243

Re: Plant Daniel Bottom Ash Pond
2020 Annual Statistical Analysis – April & October/November 2020 Sample Events

Dear Ms. Parker,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the annual Groundwater Detection and Assessment Monitoring report for Mississippi Power Company's Plant Daniel Bottom Ash Pond. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at Daniel Bottom Ash Pond for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** BAW-1 and BAW-2A
- **Downgradient wells:** BAW-3, BAW-4, BAW-5, and BAW-7

Well BAW-2 was last sampled in October 2017 and has since been abandoned; however, data for this well are included for historical concentrations. Well BAW-2A was first sampled in March 2018 and has since been sampled to supplement existing upgradient data for BAW-2.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Groundwater Statistician of Groundwater Stats Consulting.

The CCR program monitors the constituents listed below. The terms "parameters" and "constituents" are used interchangeably.

- **Appendix III** (Detection Monitoring) **-** boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) **–** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. Summaries of well/constituent pairs with 100% nondetects follow this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. For calculating prediction limits, the substitution is performed for individual wells and may differ across wells. This generally gives the most conservative limit in each case. In the time series plots, a single reporting limit substitution is used across all wells for a given parameter since the wells are plotted as a group. Note that in the case of boron, the most recent reporting limit changed to <0.08 mg/L from <0.05 mg/L in 2020 at all wells due to changing laboratory practices.

Time series plots for Appendix III and IV parameters are provided for all wells and are used to evaluate concentrations over time (Figure A). Additionally, box plots are included for all constituents at upgradient and downgradient wells (Figure B). Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graph. A summary of these values follows this letter (Figure C). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

During the previous screening, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance recommendations as discussed below.

Summary of Statistical Methods:

Based on the evaluation for federal regulatory requirements, the following methods were selected for Appendix III constituents:

- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. Parametric prediction limits (or tolerance limits or confidence intervals as applicable) are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric prediction limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric prediction limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The following approaches are used for handling nondetects (USEPA, 2009):

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. In some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality.

Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Summary of Background Screening Conducted in October 2017

Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for Appendix III and Appendix IV parameters are formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits. No suspected outliers were observed in any of the proposed background data at upgradient wells. When any values are identified as outliers, they are plotted in a lighter font on the time series graph. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

No true seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

While trends may be visual, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses showed a couple statistically significant decreasing and increasing trends. All trends noted were relatively low in magnitude when compared to average concentrations, therefore, no adjustments were made to any of the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA showed no variation for calcium, chloride, pH, sulfate, and TDS, making these parameters eligible for interwell methods. Boron and fluoride contained 100% nondetects; therefore while they could not be tested with the ANOVA, it is assumed no variation is present, making these parameters also eligible for interwell methods. A summary table of the ANOVA results was included with the October 2017 screening.

Background Update – Appendix III Parameters – November 2019

Prior to updating background data, samples were re-evaluated for all upgradient wells for interwell parameters using September 2019 sample event. An updated summary of Tukey's test results and flagged outliers was included with the 2019 Background Update report.

For parameters tested using interwell analyses, the Sen's Slope/Mann-Kendall trend test was used on upgradient wells to determine whether concentrations are statistically increasing, decreasing or stable. No statistically significant increasing or decreasing trends were noted with the exception of decreasing trends for calcium and pH in well BAW-2. The magnitude of these trends, however, is low relative to the average concentrations in these wells. Therefore, no adjustments were required at this time and these results were included in the 2019 Background Update report.

Statistical Analysis of Appendix III Parameters – April & October/November 2020

Prior to updating interwell prediction limits, data at upgradient wells were re-evaluated for outliers using Tukey's pooled upgradient outlier test and visual screening on all historical data through the October/November 2020 sample event. No new values were identified as outliers by the Tukey's test. Tukey's outlier test had previously identified an

outlier for calcium at well BAW-2 and for lithium at well BAW-1 during the November 2019 statistical analysis; therefore, those values remain flagged. A summary of flagged data follows this report (Figure C). Additionally, these values are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages.

Interwell prediction limits, combined with a 1-of-2 resample strategy, were established for each of the Appendix III parameters using pooled historical upgradient well data through April and October/November 2020, respectively, for the April and October/November 2020 sample events (Figures D and E, respectively). The reported measurements for the April and October 2020 sample events were compared to the prediction limits to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. Complete graphical results of the prediction limits may be found following this letter. Exceedances were identified for the following well/constituent pairs:

April & October/November 2020:

- BAW-3: Chloride
- BAW-4: Calcium
- BAW-5: Boron, Calcium, Chloride, pH, and TDS

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure F). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. Statistically significant trends were identified for the following well/constituent pairs:

Increasing:

- None

Decreasing:

- BAW-2 (upgradient): Calcium and pH
- BAW-5: Calcium and pH

Statistical Methods – Appendix IV Parameters

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (MCL or CCR rule-specified limits) or site-specific limits that are based on upgradient groundwater quality. Site-specific background limits are determined using upper tolerance limits, and the comparison of downgradient means or medians to GWPS is performed using confidence intervals. The methods are described below.

Evaluation of Appendix IV Parameters – April & October/November 2020

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% nondetects do not require analysis. Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis. No new values were flagged and a summary of flagged outliers follows this report (Figure C).

Parametric upper tolerance limits were used to calculate background limits from pooled upgradient well data through October/November 2020 for Appendix IV parameters with a target of 95% confidence and 95% coverage to determine background limits (Figure G). The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. These limits were compared to the Maximum Contaminant Levels (MCLs), CCR Rule-Specified levels, and background limits in the Groundwater Protection Standard (GWPS) table following this letter to determine the highest limit for use as the GWPS in the Confidence Interval comparisons (Figure H).

Confidence intervals were then constructed on downgradient wells using all data through October/November 2020 for each of the Appendix IV parameters and compared to the GWPS, i.e. the highest limit of the MCL, CCR Rule-Specified level, or background limit as discussed above (Figure I). Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its respective standard. Complete graphical results of the confidence interval follow this letter. An exceedance was identified for the following well/constituent pair:

- BAW-5: Lithium

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for the Daniel Bottom Ash Pond. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Andrew Collins
Project Manager

Kristina Rayner
Groundwater Statistician

100% Non-Detects

Analysis Run 1/20/2021 11:27 AM View: Appendix IV
Cardinal FAR II Client: Geosyntec Data: Bottom Ash CCR

Antimony (mg/L)
BAW-3, BAW-4, BAW-5, BAW-7

Arsenic (mg/L)
BAW-3

Beryllium (mg/L)
BAW-3, BAW-4, BAW-5, BAW-7

Cadmium (mg/L)
BAW-4, BAW-7

Molybdenum (mg/L)
BAW-3

Selenium (mg/L)
BAW-4

Thallium (mg/L)
BAW-4, BAW-5, BAW-7

Appendix III Interwell Prediction Limits (April 2020) - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**4/14/2020**	**0.209**	**Yes**	**34**	**n/a**	**n/a**	**91.18**	**n/a**	**n/a**	**0.001565**	**NP Inter (NDs) 1 of 2**
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**4/14/2020**	**2.95**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**4/14/2020**	**15.7**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**BAW-3**	**7.98**	**n/a**	**4/14/2020**	**8.75**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	**BAW-5**	**7.98**	**n/a**	**4/14/2020**	**8.71**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
pH (SU)	**BAW-5**	**5.466**	**4.504**	**4/14/2020**	**6.26**	**Yes**	**32**	**4.985**	**0.2576**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**BAW-5**	**57.39**	**n/a**	**4/14/2020**	**77**	**Yes**	**32**	**4.707**	**1.536**	**6.25**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**

Appendix III Interwell Prediction Limits (April 2020) - All Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BAW-3	0.0928	n/a	4/14/2020	0.08ND	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-4	0.0928	n/a	4/14/2020	0.08ND	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**4/14/2020**	**0.209**	**Yes**	**34**	**n/a**	**n/a**	**91.18**	**n/a**	**n/a**	**0.001565**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	BAW-7	0.0928	n/a	4/14/2020	0.08ND	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BAW-3	2.8	n/a	4/14/2020	0.811	No	33	n/a	n/a	3.03	n/a	n/a	0.001663	NP Inter (normality) 1 of 2
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**4/14/2020**	**2.95**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**4/14/2020**	**15.7**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	BAW-7	2.8	n/a	4/14/2020	0.532	No	33	n/a	n/a	3.03	n/a	n/a	0.001663	NP Inter (normality) 1 of 2
Chloride (mg/L)	**BAW-3**	**7.98**	**n/a**	**4/14/2020**	**8.75**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-4	7.98	n/a	4/14/2020	5.93	No	32	2.397	0.229	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Chloride (mg/L)	**BAW-5**	**7.98**	**n/a**	**4/14/2020**	**8.71**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-7	7.98	n/a	4/14/2020	4.68	No	32	2.397	0.229	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Fluoride (mg/L)	BAW-3	0.1	n/a	4/14/2020	0.034J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-4	0.1	n/a	4/14/2020	0.0508J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-5	0.1	n/a	4/14/2020	0.059J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-7	0.1	n/a	4/14/2020	0.0415J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
pH (SU)	BAW-3	5.466	4.504	4/14/2020	4.7	No	32	4.985	0.2576	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	BAW-4	5.466	4.504	4/14/2020	5.45	No	32	4.985	0.2576	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	**BAW-5**	**5.466**	**4.504**	**4/14/2020**	**6.26**	**Yes**	**32**	**4.985**	**0.2576**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
pH (SU)	BAW-7	5.466	4.504	4/14/2020	4.94	No	32	4.985	0.2576	0	None	No	0.0009398	Param Inter 1 of 2
Sulfate (mg/L)	BAW-3	5	n/a	4/14/2020	1.62	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-4	5	n/a	4/14/2020	2.99	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-5	5	n/a	4/14/2020	4.2	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-7	5	n/a	4/14/2020	1.18	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	BAW-3	57.39	n/a	4/14/2020	31	No	32	4.707	1.536	6.25	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-4	57.39	n/a	4/14/2020	30	No	32	4.707	1.536	6.25	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**BAW-5**	**57.39**	**n/a**	**4/14/2020**	**77**	**Yes**	**32**	**4.707**	**1.536**	**6.25**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	BAW-7	57.39	n/a	4/14/2020	24	No	32	4.707	1.536	6.25	None	sqrt(x)	0.00188	Param Inter 1 of 2

Appendix III Interwell Prediction Limits (October 2020) - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**10/30/2020**	**0.194**	**Yes**	**36**	**n/a**	**n/a**	**88.89**	**n/a**	**n/a**	**0.001402**	**NP Inter (NDs) 1 of 2**
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**10/30/2020**	**3.84**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**10/30/2020**	**16.4**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**BAW-3**	**8.032**	**n/a**	**10/30/2020**	**9.58**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	**BAW-5**	**8.032**	**n/a**	**10/30/2020**	**8.93**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
pH (SU)	**BAW-5**	**5.447**	**4.517**	**10/30/2020**	**6.19**	**Yes**	**34**	**4.982**	**0.2505**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**BAW-5**	**58.93**	**n/a**	**10/30/2020**	**88**	**Yes**	**34**	**4.805**	**1.547**	**5.882**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**

Appendix III Interwell Prediction Limits (October 2020) - All Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BAW-3	0.0928	n/a	10/30/2020	0.08ND	No	36	n/a	n/a	88.89	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-4	0.0928	n/a	10/30/2020	0.08ND	No	36	n/a	n/a	88.89	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**10/30/2020**	**0.194**	**Yes**	**36**	**n/a**	**n/a**	**88.89**	**n/a**	**n/a**	**0.001402**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	BAW-7	0.0928	n/a	11/2/2020	0.08ND	No	36	n/a	n/a	88.89	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BAW-3	2.8	n/a	10/30/2020	1	No	35	n/a	n/a	2.857	n/a	n/a	0.001468	NP Inter (normality) 1 of 2
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**10/30/2020**	**3.84**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**10/30/2020**	**16.4**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	BAW-7	2.8	n/a	11/2/2020	0.535	No	35	n/a	n/a	2.857	n/a	n/a	0.001468	NP Inter (normality) 1 of 2
Chloride (mg/L)	**BAW-3**	**8.032**	**n/a**	**10/30/2020**	**9.58**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-4	8.032	n/a	10/30/2020	6.49	No	34	2.406	0.2305	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Chloride (mg/L)	**BAW-5**	**8.032**	**n/a**	**10/30/2020**	**8.93**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-7	8.032	n/a	11/2/2020	4.91	No	34	2.406	0.2305	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Fluoride (mg/L)	BAW-3	0.1	n/a	10/30/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-4	0.1	n/a	10/30/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-5	0.1	n/a	10/30/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-7	0.1	n/a	11/2/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
pH (SU)	BAW-3	5.447	4.517	10/30/2020	4.8	No	34	4.982	0.2505	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	BAW-4	5.447	4.517	10/30/2020	5.32	No	34	4.982	0.2505	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	**BAW-5**	**5.447**	**4.517**	**10/30/2020**	**6.19**	**Yes**	**34**	**4.982**	**0.2505**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
pH (SU)	BAW-7	5.447	4.517	11/2/2020	4.92	No	34	4.982	0.2505	0	None	No	0.0009398	Param Inter 1 of 2
Sulfate (mg/L)	BAW-3	5	n/a	10/30/2020	1.44	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-4	5	n/a	10/30/2020	2.84	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-5	5	n/a	10/30/2020	4.76	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-7	5	n/a	11/2/2020	1.08	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	BAW-3	58.93	n/a	10/30/2020	40	No	34	4.805	1.547	5.882	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-4	58.93	n/a	10/30/2020	40	No	34	4.805	1.547	5.882	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**BAW-5**	**58.93**	**n/a**	**10/30/2020**	**88**	**Yes**	**34**	**4.805**	**1.547**	**5.882**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	BAW-7	58.93	n/a	11/2/2020	28	No	34	4.805	1.547	5.882	None	sqrt(x)	0.00188	Param Inter 1 of 2

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:42 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	**BAW-2 (bg)**	**-0.4143**	**-23**	**-21**	**Yes**	**8**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**BAW-5**	**-1.213**	**-79**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**BAW-2 (bg)**	**-0.5393**	**-29**	**-25**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**BAW-5**	**-0.1029**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:42 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BAW-1 (bg)	0	13	68	No	18	94.44	n/a	n/a	0.01	NP
Boron (mg/L)	BAW-2 (bg)	0	0	25	No	9	100	n/a	n/a	0.01	NP
Boron (mg/L)	BAW-2A (bg)	0	-7	-25	No	9	66.67	n/a	n/a	0.01	NP
Boron (mg/L)	BAW-5	-0.02755	-62	-68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BAW-1 (bg)	0.01816	17	68	No	18	5.556	n/a	n/a	0.01	NP
Calcium (mg/L)	**BAW-2 (bg)**	**-0.4143**	**-23**	**-21**	**Yes**	**8**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	BAW-2A (bg)	-0.03661	-10	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BAW-4	0.04897	18	68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**BAW-5**	**-1.213**	**-79**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	BAW-1 (bg)	-0.09982	-26	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-2 (bg)	1.001	18	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-2A (bg)	0.5831	10	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-3	0.4303	60	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-5	-0.1227	-20	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	BAW-1 (bg)	-0.04636	-28	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	**BAW-2 (bg)**	**-0.5393**	**-29**	**-25**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	BAW-2A (bg)	-0.1697	-15	-21	No	8	0	n/a	n/a	0.01	NP
pH (SU)	**BAW-5**	**-0.1029**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	BAW-1 (bg)	0	2	63	No	17	11.76	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-2 (bg)	-5.236	-4	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-2A (bg)	4.364	3	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-5	-7.365	-54	-63	No	17	0	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:45 PM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.002	n/a	n/a	28	n/a	n/a	96.43	n/a	n/a	0.2378	NP Inter(NDs)
Arsenic (mg/L)	0.001	n/a	n/a	34	n/a	n/a	100	n/a	n/a	0.1748	NP Inter(NDs)
Barium (mg/L)	0.0411	n/a	n/a	34	0.001021	0.000307	0	None	x^2	0.05	Inter
Beryllium (mg/L)	0.0025	n/a	n/a	30	n/a	n/a	96.67	n/a	n/a	0.2146	NP Inter(NDs)
Cadmium (mg/L)	0.0025	n/a	n/a	34	n/a	n/a	97.06	n/a	n/a	0.1748	NP Inter(NDs)
Chromium (mg/L)	0.00286	n/a	n/a	32	n/a	n/a	87.5	n/a	n/a	0.1937	NP Inter(NDs)
Cobalt (mg/L)	0.001302	n/a	n/a	34	0.0008678	0.0001995	5.882	None	No	0.05	Inter
Combined Radium 226 + 228 (pCi/L)	2.5	n/a	n/a	34	n/a	n/a	5.882	n/a	n/a	0.1748	NP Inter(normality)
Fluoride (mg/L)	0.1	n/a	n/a	36	n/a	n/a	91.67	n/a	n/a	0.1578	NP Inter(NDs)
Lead (mg/L)	0.001	n/a	n/a	32	n/a	n/a	100	n/a	n/a	0.1937	NP Inter(NDs)
Lithium (mg/L)	0.00505	n/a	n/a	33	n/a	n/a	69.7	n/a	n/a	0.184	NP Inter(NDs)
Mercury (mg/L)	0.0002	n/a	n/a	26	n/a	n/a	92.31	n/a	n/a	0.2635	NP Inter(NDs)
Molybdenum (mg/L)	0.015	n/a	n/a	30	n/a	n/a	86.67	n/a	n/a	0.2146	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	30	n/a	n/a	80	n/a	n/a	0.2146	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	30	n/a	n/a	96.67	n/a	n/a	0.2146	NP Inter(NDs)

PLANT DANIEL BOTTOM ASH GWPS				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.002	0.006
Arsenic, Total (mg/L)	0.01		0.001	0.01
Barium, Total (mg/L)	2		0.041	2
Beryllium, Total (mg/L)	0.004		0.0025	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.0029	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.0013	0.006
Combined Radium, Total (pCi/L)	5		2.5	5
Fluoride, Total (mg/L)	4		0.1	4
Lead, Total (mg/L)	0.015		0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.0051	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.015	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	**BAW-5**	**0.1965**	**0.1736**	**0.04**	**Yes**	**17**	**0.1851**	**0.01823**	**0**	**None**	**No**	**0.01**	**Param.**

Confidence Intervals - All Results

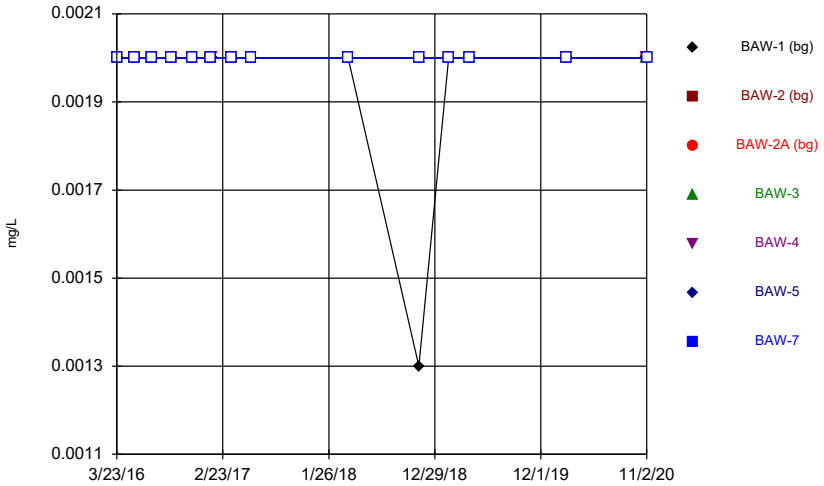
Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	BAW-4	0.0009291	0.0007009	0.01	No	17	0.0008585	0.0001831	23.53	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	BAW-5	0.002834	0.001642	0.01	No	17	0.002238	0.0009515	0	None	No	0.01	Param.
Arsenic (mg/L)	BAW-7	0.001	0.00052	0.01	No	17	0.0009424	0.0001628	88.24	None	No	0.01	NP (NDs)
Barium (mg/L)	BAW-3	0.02943	0.02055	2	No	17	0.02499	0.00709	0	None	No	0.01	Param.
Barium (mg/L)	BAW-4	0.01037	0.008872	2	No	17	0.009622	0.001197	0	None	No	0.01	Param.
Barium (mg/L)	BAW-5	0.04577	0.04076	2	No	17	0.04331	0.004082	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BAW-7	0.01232	0.01111	2	No	17	0.01172	0.0009632	0	None	No	0.01	Param.
Cadmium (mg/L)	BAW-3	0.001071	0.0006494	0.005	No	17	0.0009067	0.0004564	5.882	None	ln(x)	0.01	Param.
Cadmium (mg/L)	BAW-5	0.0025	0.000155	0.005	No	17	0.002362	0.0005687	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-3	0.003	0.00165	0.1	No	16	0.002041	0.0002703	87.5	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-4	0.002	0.0015	0.1	No	16	0.001881	0.0002689	81.25	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-5	0.0024	0.0012	0.1	No	16	0.002163	0.0007907	81.25	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-7	0.00206	0.002	0.1	No	16	0.002004	0.000015	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BAW-3	0.006256	0.005404	0.006	No	17	0.00583	0.0006801	0	None	No	0.01	Param.
Cobalt (mg/L)	BAW-4	0.001192	0.0009562	0.006	No	17	0.001074	0.000188	0	None	No	0.01	Param.
Cobalt (mg/L)	BAW-5	0.0025	0.00042	0.006	No	17	0.002378	0.0005045	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BAW-7	0.0009234	0.0007346	0.006	No	17	0.000829	0.0001507	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BAW-3	0.646	0.0761	5	No	17	0.5758	0.7808	11.76	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BAW-4	0.3729	0.03871	5	No	17	0.6413	0.9036	17.65	Kaplan-Meier	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BAW-5	0.7011	0.3058	5	No	16	0.5833	0.5468	6.25	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BAW-7	0.4345	0.1335	5	No	17	0.7052	0.8768	17.65	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BAW-3	0.1	0.034	4	No	18	0.09633	0.01556	94.44	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BAW-4	0.1	0.04	4	No	18	0.06142	0.02857	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	BAW-5	0.06637	0.04969	4	No	18	0.05868	0.01461	5.556	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BAW-7	0.1	0.0415	4	No	18	0.09675	0.01379	94.44	None	No	0.01	NP (NDs)
Lead (mg/L)	BAW-3	0.001	0.00015	0.015	No	16	0.0006427	0.0003828	50	None	No	0.01	NP (normality)
Lead (mg/L)	BAW-4	0.001	0.00042	0.015	No	16	0.0008751	0.0002724	81.25	None	No	0.01	NP (NDs)
Lead (mg/L)	BAW-5	0.001	0.000152	0.015	No	16	0.000947	0.000212	93.75	None	No	0.01	NP (NDs)
Lead (mg/L)	BAW-7	0.001	0.000129	0.015	No	16	0.0009456	0.0002178	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BAW-3	0.00687	0.0024	0.04	No	17	0.004444	0.00138	70.59	None	No	0.01	NP (NDs)
Lithium (mg/L)	BAW-4	0.027	0.0224	0.04	No	17	0.02574	0.005177	0	None	No	0.01	NP (normality)
Lithium (mg/L)	**BAW-5**	**0.1965**	**0.1736**	**0.04**	**Yes**	**17**	**0.1851**	**0.01823**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	BAW-7	0.005	0.0029	0.04	No	17	0.004284	0.001044	64.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-3	0.000497	0.00013	0.002	No	13	0.0002085	0.00009382	76.92	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-4	0.0002	0.00013	0.002	No	13	0.0001848	0.00003878	84.62	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-5	0.0002	0.000074	0.002	No	13	0.0001903	0.00003495	92.31	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-7	0.0002	0.000071	0.002	No	13	0.0001901	0.00003578	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BAW-4	0.015	0.000616	0.1	No	15	0.01404	0.003714	93.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BAW-5	0.015	0.001	0.1	No	15	0.007372	0.006685	40	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BAW-7	0.015	0.0038	0.1	No	15	0.01425	0.002892	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BAW-3	0.005	0.00033	0.05	No	15	0.002892	0.002338	53.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BAW-5	0.005	0.00033	0.05	No	15	0.004689	0.001206	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BAW-7	0.005	0.00031	0.05	No	15	0.003553	0.002162	66.67	None	No	0.01	NP (NDs)
Thallium (mg/L)	BAW-3	0.001	0.000158	0.002	No	15	0.0007743	0.0003896	73.33	None	No	0.01	NP (NDs)

FIGURE A.

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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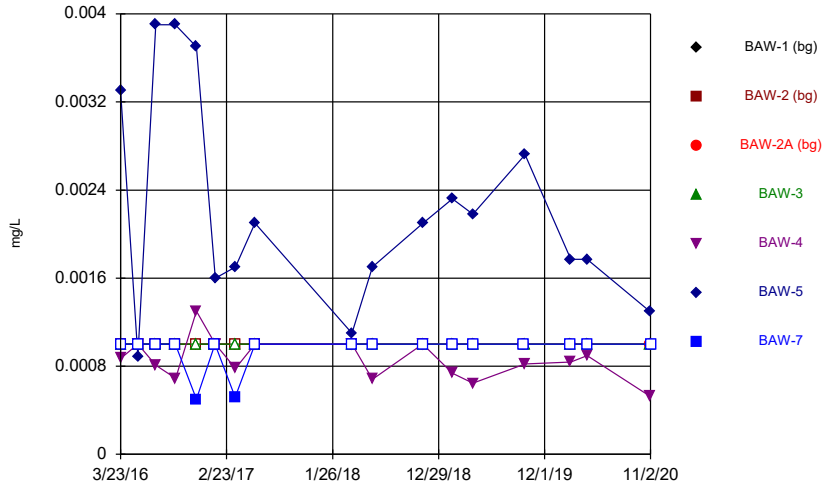

Constituent: Arsenic Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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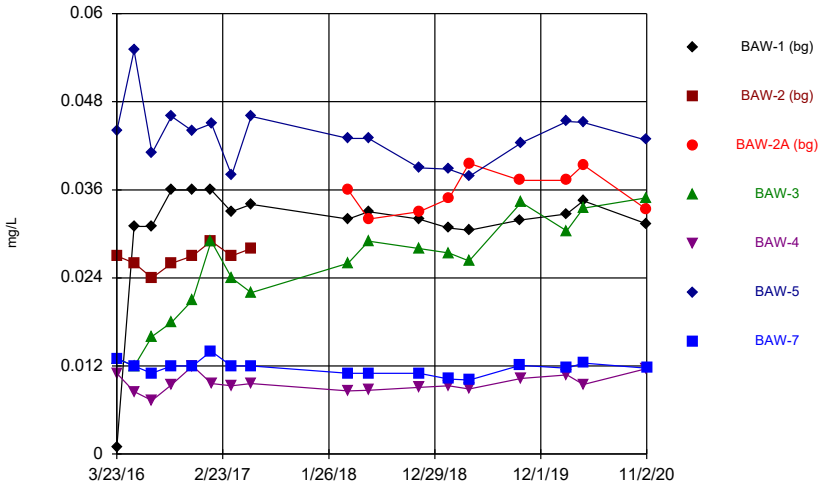
Time Series



Constituent: Barium Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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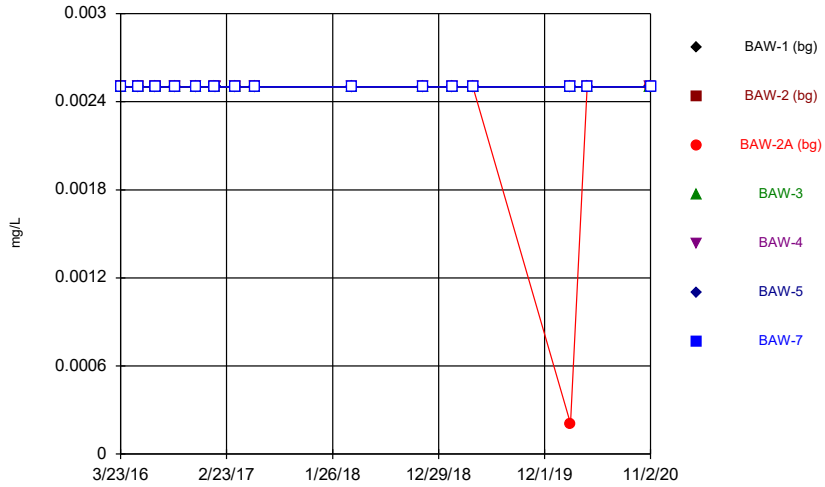

Constituent: Beryllium Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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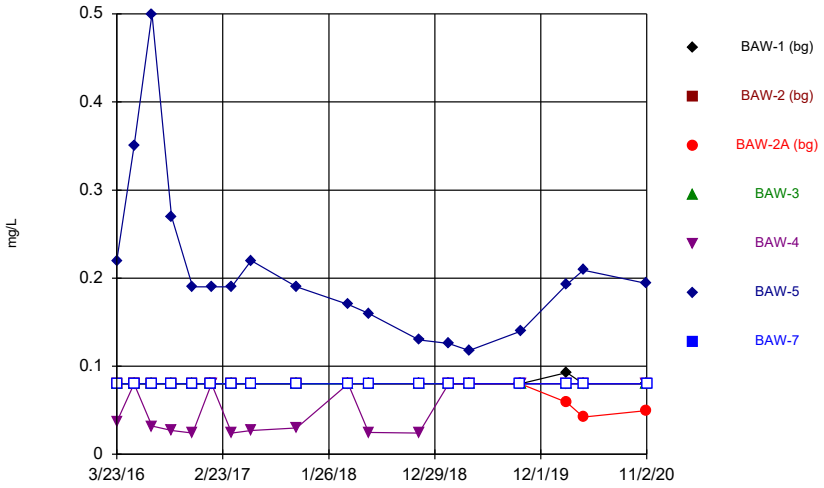

Constituent: Boron Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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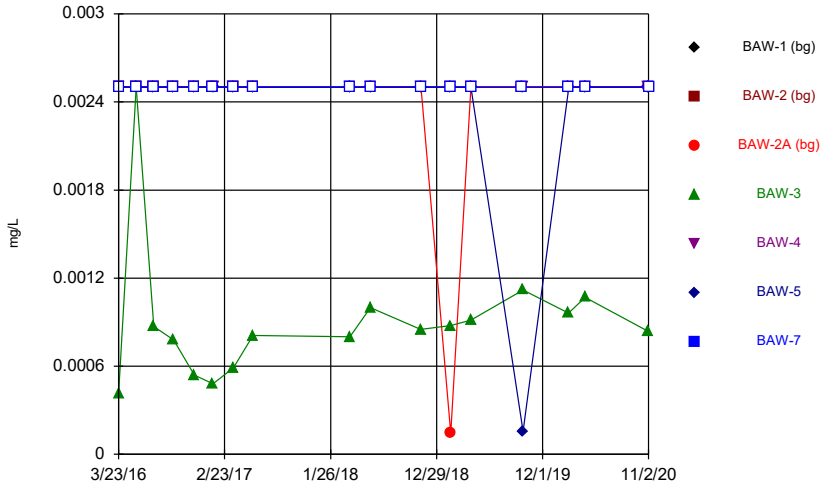

Constituent: Cadmium Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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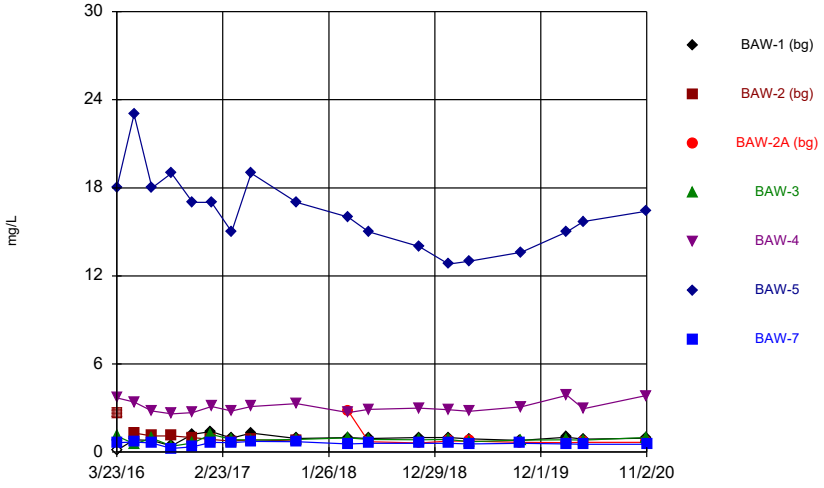

Constituent: Calcium Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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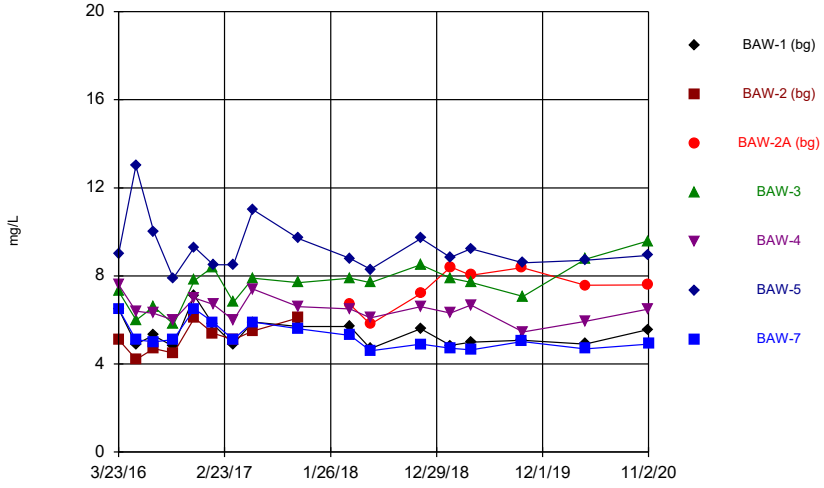
Time Series



Constituent: Chloride Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
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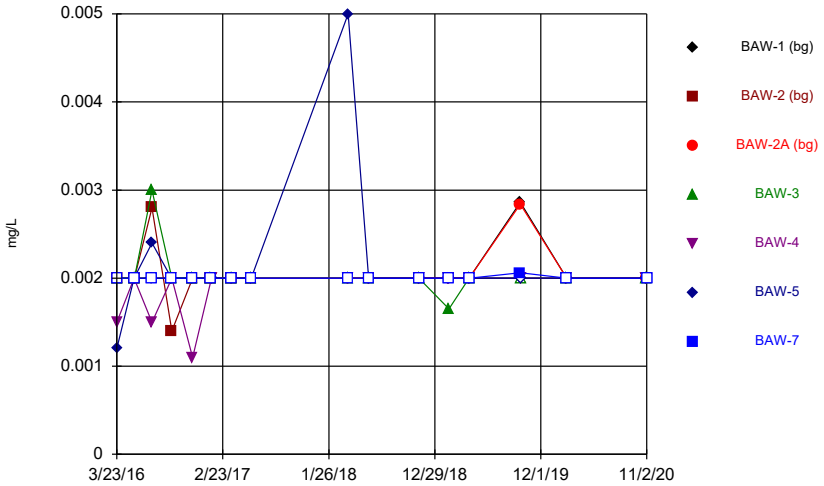
Time Series



Constituent: Chromium Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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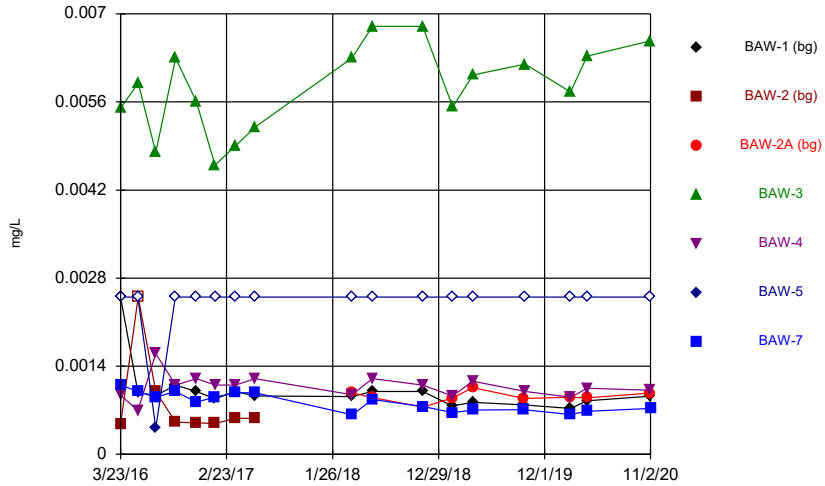

Constituent: Cobalt Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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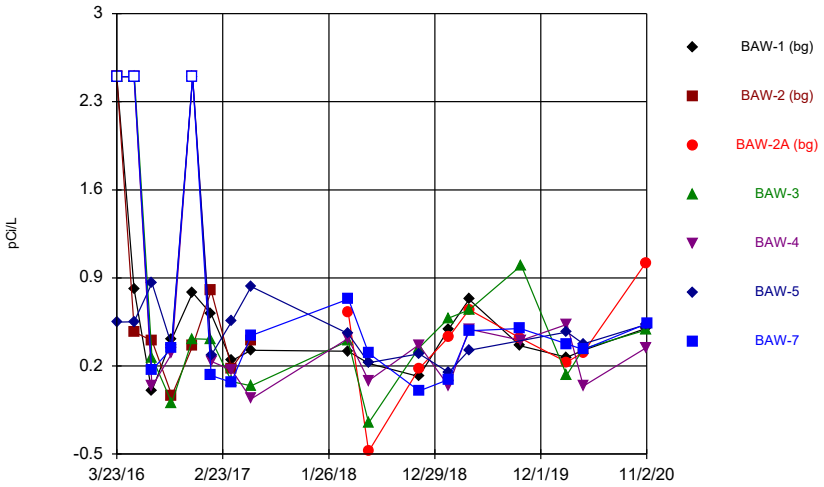
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
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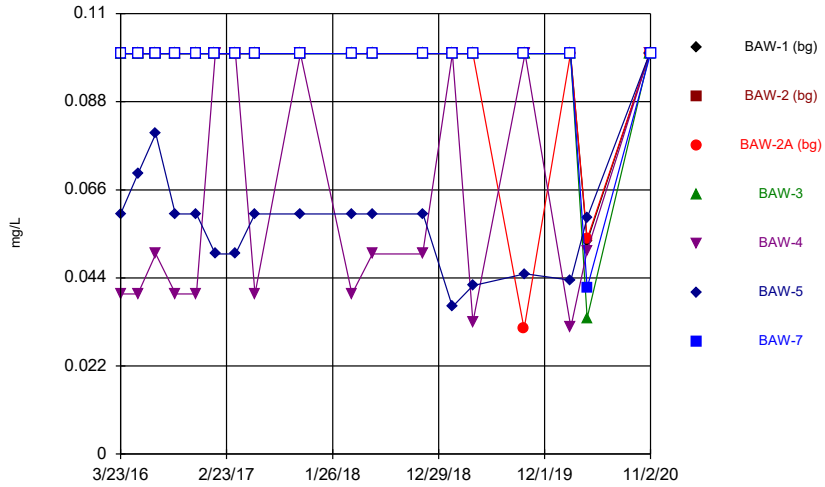
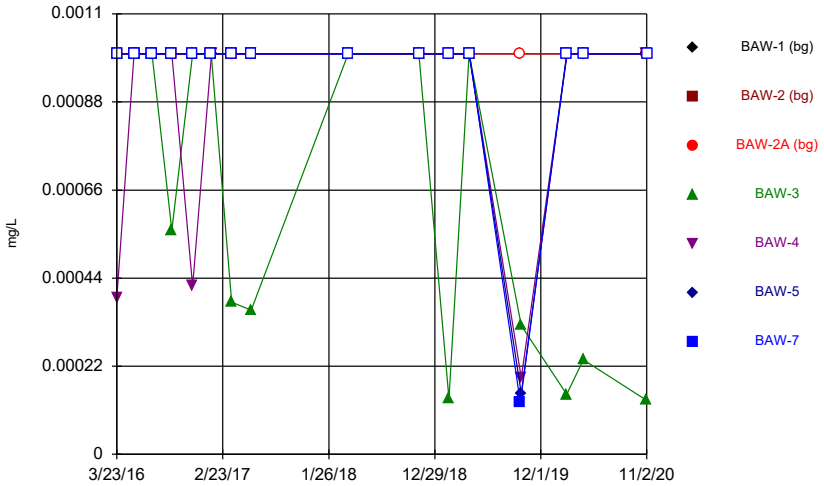
Time Series



Constituent: Fluoride Analysis Run 1/20/2021 4:30 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

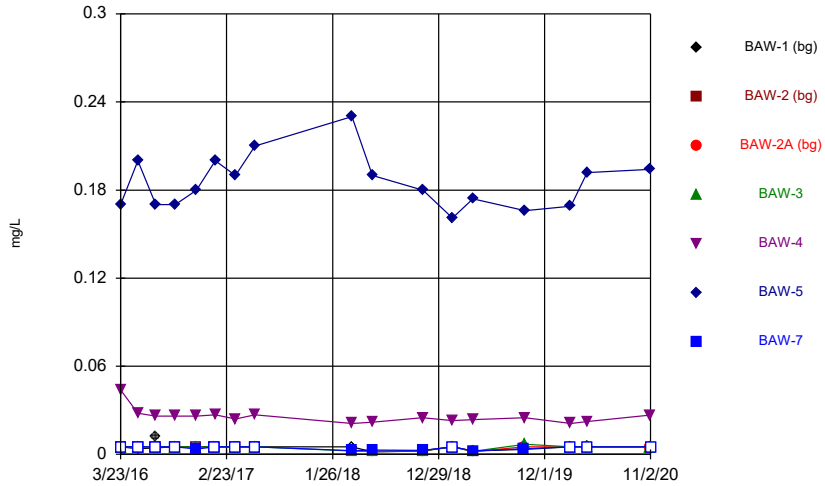
Time Series



Constituent: Lead Analysis Run 1/20/2021 4:31 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

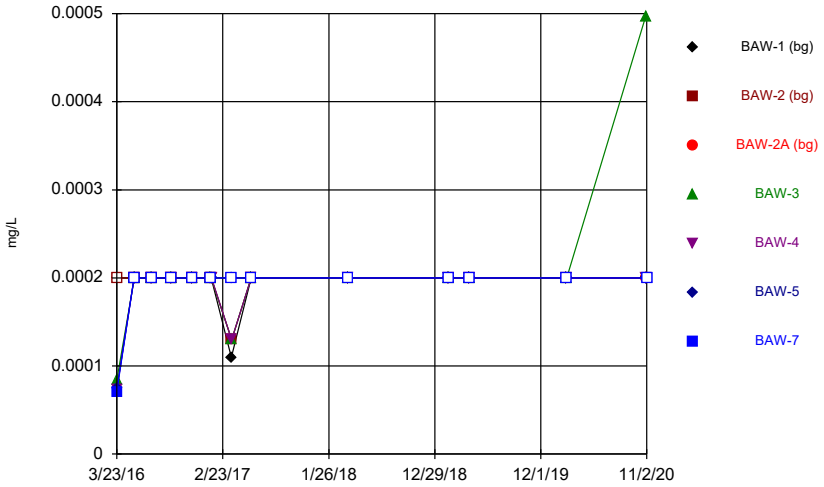
Time Series



Constituent: Lithium Analysis Run 1/20/2021 4:31 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

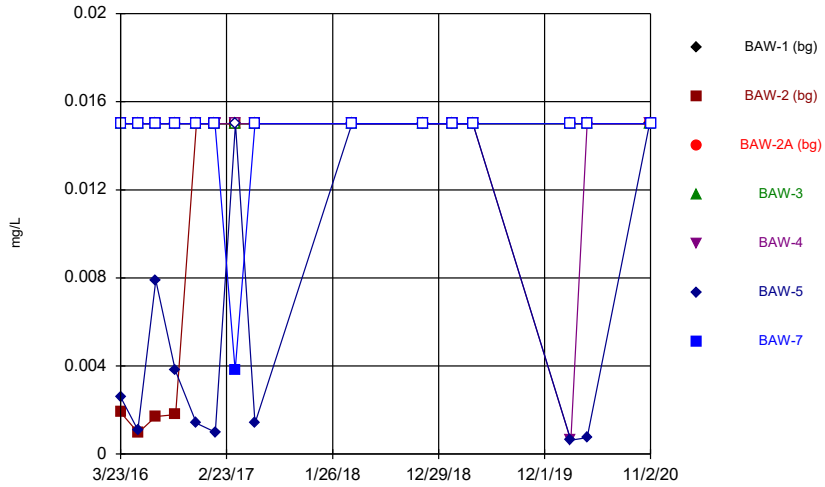
Time Series



Constituent: Mercury Analysis Run 1/20/2021 4:31 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

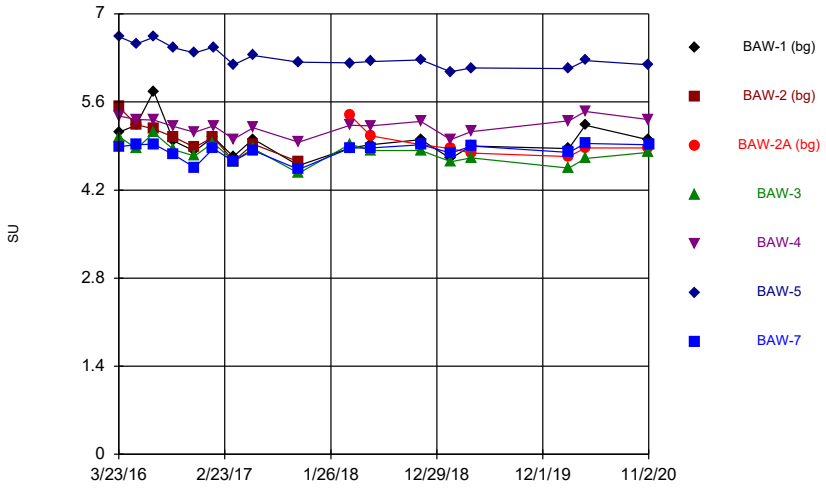
Time Series



Constituent: Molybdenum Analysis Run 1/20/2021 4:31 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Time Series



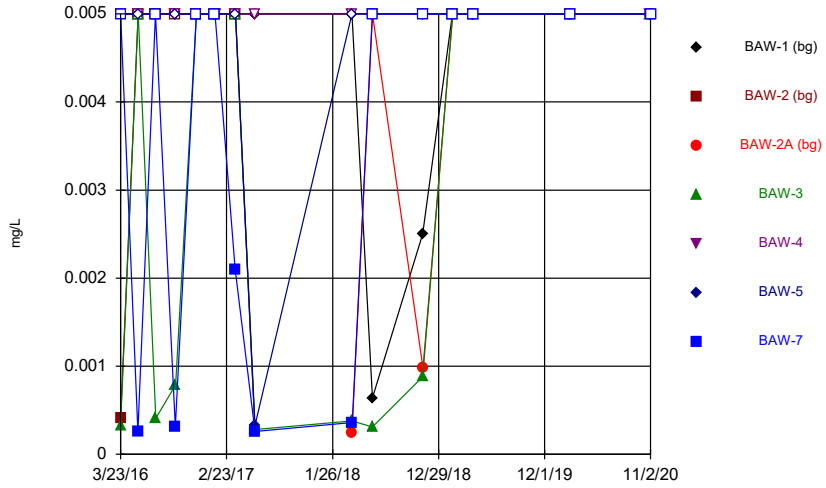
Constituent: pH Analysis Run 1/20/2021 4:31 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



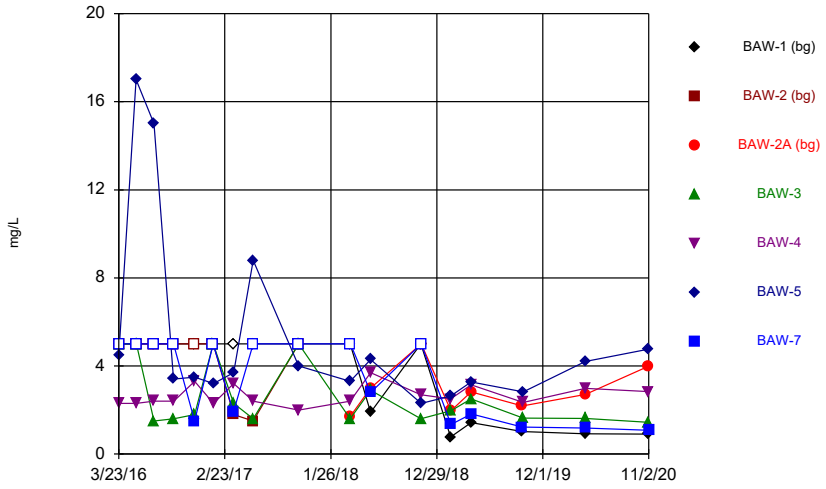
Constituent: Selenium Analysis Run 1/20/2021 4:31 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series



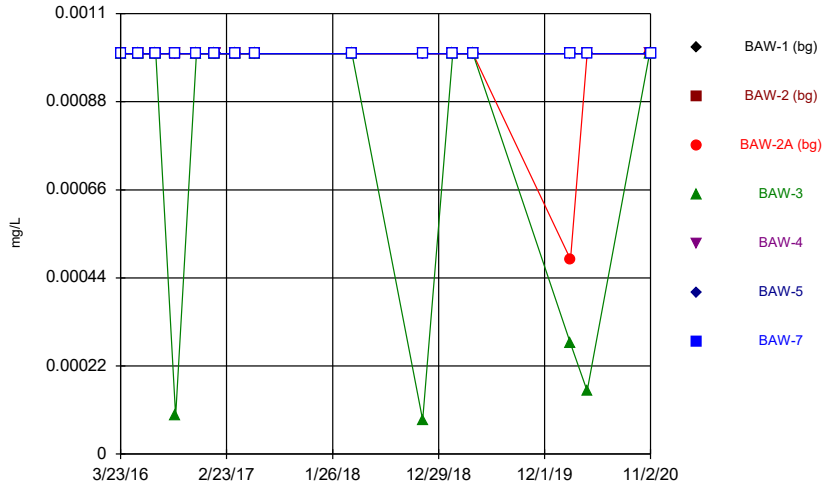
Constituent: Sulfate Analysis Run 1/20/2021 4:31 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Time Series

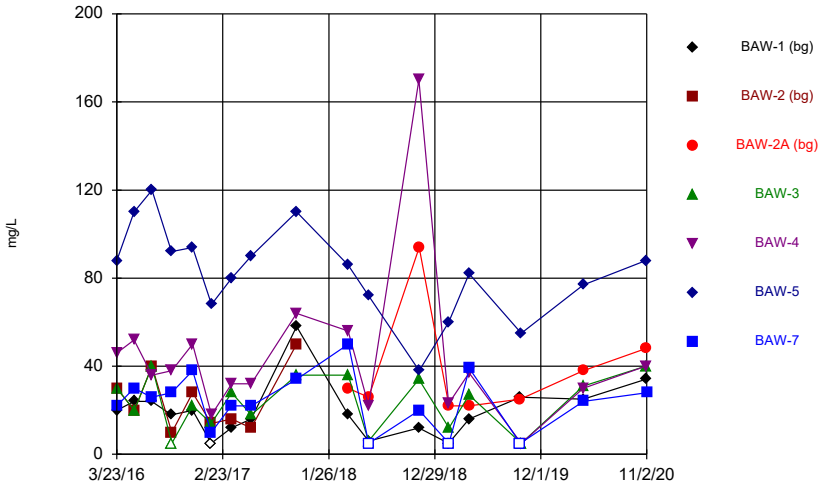


Constituent: Thallium Analysis Run 1/20/2021 4:31 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:31 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Time Series

Constituent: Antimony (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
5/17/2016	<0.002				<0.002	<0.002	<0.002
5/18/2016		<0.002		<0.002			
7/12/2016	<0.002						<0.002
7/13/2016		<0.002		<0.002	<0.002	<0.002	
9/13/2016	<0.002					<0.002	<0.002
9/14/2016		<0.002		<0.002	<0.002		
11/19/2016	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
1/17/2017	<0.002	<0.002		<0.002			<0.002
1/18/2017					<0.002	<0.002	
3/22/2017	<0.002						<0.002
3/23/2017		<0.002		<0.002	<0.002	<0.002	
5/24/2017	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
3/28/2018	<0.002		<0.002	<0.002	<0.002	<0.002	
3/29/2018							<0.002
11/8/2018	0.0013 (J)			<0.002	<0.002		
11/9/2018			<0.002			<0.002	<0.002
2/11/2019	<0.002				<0.002	<0.002	
2/12/2019			<0.002	<0.002			<0.002
4/17/2019	<0.002		<0.002	<0.002	<0.002	<0.002	
4/18/2019							<0.002
2/21/2020	<0.002		<0.002	<0.002			<0.002
2/22/2020					<0.002	<0.002	
10/30/2020	<0.002		<0.002	<0.002	<0.002	<0.002	
11/2/2020							<0.002

Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.001	<0.001		<0.001	0.00087 (J)	0.0033	<0.001
5/17/2016	<0.001				<0.001	0.00089 (J)	<0.001
5/18/2016		<0.001		<0.001			
7/12/2016	<0.001						<0.001
7/13/2016		<0.001		<0.001	0.00081 (J)	0.0039	
9/13/2016	<0.001					0.0039	<0.001
9/14/2016		<0.001		<0.001	0.00069 (J)		
11/19/2016	<0.001	<0.001		<0.001	0.0013	0.0037	0.0005 (J)
1/17/2017	<0.001	<0.001		<0.001			<0.001
1/18/2017					<0.001	0.0016	
3/22/2017	<0.001						0.00052 (J)
3/23/2017		<0.001		<0.001	0.00078 (J)	0.0017	
5/24/2017	<0.001	<0.001		<0.001	0.001 (J)	0.0021	<0.001
3/28/2018	<0.001		<0.001	<0.001	<0.001	0.0011 (J)	
3/29/2018							<0.001
6/2/2018	<0.001		<0.001	<0.001	0.00068 (J)	0.0017	<0.001
11/8/2018	<0.001			<0.001	<0.001		
11/9/2018			<0.001			0.0021	<0.001
2/11/2019	<0.001				0.000737 (J)	0.00232	
2/12/2019			<0.001	<0.001			<0.001
4/17/2019	<0.001		<0.001	<0.001	0.000645 (J)	0.00218	
4/18/2019							<0.001
9/27/2019	<0.001		<0.001				<0.001
9/30/2019				<0.001	0.000821 (J)	0.00272	
2/21/2020	<0.001		<0.001	<0.001			<0.001
2/22/2020					0.000837 (J)	0.00177	
4/14/2020	<0.001		<0.001	<0.001	0.000896 (J)	0.00177	<0.001
10/30/2020	<0.001		<0.001	<0.001	0.000529 (J)	0.0013	
11/2/2020							<0.001

Time Series

Constituent: Barium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	0.00084 (J)	0.027		0.013	0.011	0.044	0.013
5/17/2016	0.031				0.0085	0.055	0.012
5/18/2016		0.026		0.012			
7/12/2016	0.031						0.011
7/13/2016		0.024		0.016	0.0073	0.041	
9/13/2016	0.036					0.046	0.012
9/14/2016		0.026		0.018	0.0095		
11/19/2016	0.036	0.027		0.021	0.012	0.044	0.012
1/17/2017	0.036	0.029		0.029			0.014
1/18/2017					0.0096	0.045	
3/22/2017	0.033						0.012
3/23/2017		0.027		0.024	0.0093	0.038	
5/24/2017	0.034	0.028		0.022	0.0096	0.046	0.012
3/28/2018	0.032		0.036	0.026	0.0086	0.043	
3/29/2018							0.011
6/2/2018	0.033		0.032	0.029	0.0087	0.043	0.011
11/8/2018	0.032			0.028	0.0091		
11/9/2018			0.033			0.039	0.011
2/11/2019	0.0308				0.00931	0.0388	
2/12/2019			0.0348	0.0274			0.0102
4/17/2019	0.0305		0.0396	0.0263	0.00888	0.0378	
4/18/2019							0.0101
9/27/2019	0.0319		0.0373				0.0121
9/30/2019				0.0343	0.0103	0.0424	
2/21/2020	0.0327		0.0373	0.0304			0.0117
2/22/2020					0.0108	0.0453	
4/14/2020	0.0345		0.0394	0.0335	0.00949 (J)	0.0452	0.0124
10/30/2020	0.0314		0.0334	0.0349	0.0116	0.0428	
11/2/2020							0.0117

Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.0025	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025
5/17/2016	<0.0025				<0.0025	<0.0025	<0.0025
5/18/2016		<0.0025		<0.0025			
7/12/2016	<0.0025						<0.0025
7/13/2016		<0.0025		<0.0025	<0.0025	<0.0025	
9/13/2016	<0.0025					<0.0025	<0.0025
9/14/2016		<0.0025		<0.0025	<0.0025		
11/19/2016	<0.0025	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025
1/17/2017	<0.0025	<0.0025		<0.0025			<0.0025
1/18/2017					<0.0025	<0.0025	
3/22/2017	<0.0025						<0.0025
3/23/2017		<0.0025		<0.0025	<0.0025	<0.0025	
5/24/2017	<0.0025	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025
3/28/2018	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025	
3/29/2018							<0.0025
11/8/2018	<0.0025			<0.0025	<0.0025		
11/9/2018			<0.0025			<0.0025	<0.0025
2/11/2019	<0.0025				<0.0025	<0.0025	
2/12/2019			<0.0025	<0.0025			<0.0025
4/17/2019	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025	
4/18/2019							<0.0025
2/21/2020	<0.0025		0.000207 (J)	<0.0025			<0.0025
2/22/2020					<0.0025	<0.0025	
4/14/2020	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
10/30/2020	<0.0025		<0.0025	<0.0025	<0.0025	<0.0025	
11/2/2020							<0.0025

Time Series

Constituent: Boron (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.08	<0.08		<0.08	0.037 (J)	0.22	<0.08
5/17/2016	<0.08				<0.08	0.35	<0.08
5/18/2016		<0.08		<0.08			
7/12/2016	<0.08						<0.08
7/13/2016		<0.08		<0.08	0.032 (J)	0.5	
9/13/2016	<0.08					0.27	<0.08
9/14/2016		<0.08		<0.08	0.027 (J)		
11/19/2016	<0.08	<0.08		<0.08	0.024 (J)	0.19	<0.08
1/17/2017	<0.08	<0.08		<0.08			<0.08
1/18/2017					<0.08	0.19	
3/22/2017	<0.08						<0.08
3/23/2017		<0.08		<0.08	0.024 (J)	0.19	
5/24/2017	<0.08	<0.08		<0.08	0.027 (J)	0.22	<0.08
10/16/2017	<0.08	<0.08		<0.08	0.03 (J)	0.19	<0.08
3/28/2018	<0.08		<0.08	<0.08	<0.08	0.17	
3/29/2018							<0.08
6/2/2018	<0.08		<0.08	<0.08	0.025 (J)	0.16	<0.08
11/8/2018	<0.08			<0.08	0.024 (J)		
11/9/2018			<0.08			0.13	<0.08
2/11/2019	<0.08				<0.08	0.126	
2/12/2019			<0.08	<0.08			<0.08
4/17/2019	<0.08		<0.08	<0.08	<0.08	0.118	
4/18/2019							<0.08
9/27/2019	<0.08		<0.08				<0.08
9/30/2019				<0.08	<0.08	0.14	
2/21/2020	0.0928		0.0589 (J)	<0.08			<0.08
2/22/2020					<0.08	0.193	
4/14/2020	<0.08		0.0424 (J)	<0.08	<0.08	0.209	<0.08
10/30/2020	<0.08		0.0495 (J)	<0.08	<0.08	0.194	
11/2/2020							<0.08

Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.0025	<0.0025		0.00041 (J)	<0.0025	<0.0025	<0.0025
5/17/2016	<0.0025				<0.0025	<0.0025	<0.0025
5/18/2016		<0.0025		<0.0025			
7/12/2016	<0.0025						<0.0025
7/13/2016		<0.0025		0.00087 (J)	<0.0025	<0.0025	
9/13/2016	<0.0025					<0.0025	<0.0025
9/14/2016		<0.0025		0.00078 (J)	<0.0025		
11/19/2016	<0.0025	<0.0025		0.00054 (J)	<0.0025	<0.0025	<0.0025
1/17/2017	<0.0025	<0.0025		0.00048 (J)			<0.0025
1/18/2017					<0.0025	<0.0025	
3/22/2017	<0.0025						<0.0025
3/23/2017		<0.0025		0.00059 (J)	<0.0025	<0.0025	
5/24/2017	<0.0025	<0.0025		0.00081 (J)	<0.0025	<0.0025	<0.0025
3/28/2018	<0.0025		<0.0025	0.0008 (J)	<0.0025	<0.0025	
3/29/2018							<0.0025
6/2/2018	<0.0025		<0.0025	0.001 (J)	<0.0025	<0.0025	<0.0025
11/8/2018	<0.0025			0.00085 (J)	<0.0025		
11/9/2018			<0.0025			<0.0025	<0.0025
2/11/2019	<0.0025				<0.0025	<0.0025	
2/12/2019			0.000143 (J)	0.000877 (J)			<0.0025
4/17/2019	<0.0025		<0.0025	0.000915 (J)	<0.0025	<0.0025	
4/18/2019							<0.0025
9/27/2019	<0.0025		<0.0025				<0.0025
9/30/2019				0.00112 (J)	<0.0025	0.000155 (J)	
2/21/2020	<0.0025		<0.0025	0.000962 (J)			<0.0025
2/22/2020					<0.0025	<0.0025	
4/14/2020	<0.0025		<0.0025	0.00107 (J)	<0.0025	<0.0025	<0.0025
10/30/2020	<0.0025		<0.0025	0.00084 (J)	<0.0025	<0.0025	
11/2/2020							<0.0025

Time Series

Constituent: Calcium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.25	2.6 (o)		1.1	3.7	18	0.65
5/17/2016	0.84				3.4	23	0.68
5/18/2016		1.3		0.56			
7/12/2016	0.79						0.62
7/13/2016		1.1		0.95	2.8	18	
9/13/2016	0.42					19	0.25
9/14/2016		1.1		0.4	2.6		
11/19/2016	1.2	1		0.62	2.7	17	0.36
1/17/2017	1.4	0.87		1.2			0.66
1/18/2017					3.1	17	
3/22/2017	0.95						0.65
3/23/2017		0.74		0.87	2.8	15	
5/24/2017	1.3	0.84		0.81	3.1	19	0.72
10/16/2017	0.93	0.76		0.86	3.3	17	0.7
3/28/2018	1		2.8	0.97	2.7	16	
3/29/2018							0.55
6/2/2018	0.93		0.71	0.86	2.9	15	0.6
11/8/2018	1			0.84	3		
11/9/2018			0.61			14	0.59
2/11/2019	1				2.88	12.8	
2/12/2019			0.757	0.856			0.608
4/17/2019	0.893		0.755	0.711	2.77	13	
4/18/2019							0.55
9/27/2019	0.8		0.663				0.598
9/30/2019				0.826	3.08	13.6	
2/21/2020	1.02		0.648	0.841			0.552
2/22/2020					3.86	15	
4/14/2020	0.887		0.67	0.811	2.95	15.7	0.532
10/30/2020	0.945		0.672	1	3.84	16.4	
11/2/2020							0.535

Time Series

Constituent: Chloride (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	6.5	5.1		7.3	7.6	9	6.5
5/17/2016	4.9				6.4	13	5.1
5/18/2016		4.2		6			
7/12/2016	5.3						5
7/13/2016		4.7		6.6	6.3	10	
9/13/2016	4.8 (F1)					7.9	5.1
9/14/2016		4.5		5.8	6		
11/19/2016	7.1	6.1		7.8	7	9.3	6.5
1/17/2017	5.8	5.4		8.4			5.9
1/18/2017					6.7	8.5	
3/22/2017	4.9						5.1
3/23/2017		5.1		6.8	6	8.5	
5/24/2017	5.9	5.5		7.9	7.4	11	5.9
10/16/2017	5.7	6.1		7.7	6.6	9.7	5.6
3/28/2018	5.7		6.7	7.9	6.5	8.8	
3/29/2018							5.3
6/2/2018	4.7		5.8	7.7	6.1	8.3	4.6
11/8/2018	5.6			8.5	6.6		
11/9/2018			7.2			9.7	4.9
2/11/2019	4.84				6.31	8.84	
2/12/2019			8.4	7.89			4.72
4/17/2019	4.99		8.03	7.71	6.68	9.24	
4/18/2019							4.64
9/27/2019	5.08		8.37				5.02
9/30/2019				7.07	5.45	8.59	
4/14/2020	4.91		7.57	8.75	5.93	8.71	4.68
10/30/2020	5.55		7.59	9.58	6.49	8.93	
11/2/2020							4.91

Time Series

Constituent: Chromium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.002	<0.002		<0.002	0.0015 (J)	0.0012 (J)	<0.002
5/17/2016	<0.002				<0.002	<0.002	<0.002
5/18/2016		<0.002		<0.002			
7/12/2016	<0.002						<0.002
7/13/2016		0.0028		0.003	0.0015 (J)	0.0024 (J)	
9/13/2016	<0.002					<0.002	<0.002
9/14/2016		0.0014 (J)		<0.002	<0.002		
11/19/2016	<0.002	<0.002		<0.002	0.0011 (J)	<0.002	<0.002
1/17/2017	<0.002	<0.002		<0.002			<0.002
1/18/2017					<0.002	<0.002	
3/22/2017	<0.002						<0.002
3/23/2017		<0.002		<0.002	<0.002	<0.002	
5/24/2017	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
3/28/2018	<0.002		<0.002	<0.002	<0.002	0.005	
3/29/2018							<0.002
6/2/2018	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002
11/8/2018	<0.002			<0.002	<0.002		
11/9/2018			<0.002			<0.002	<0.002
2/11/2019	<0.002				<0.002	<0.002	
2/12/2019			<0.002	0.00165 (J)			<0.002
4/17/2019	<0.002		<0.002	<0.002	<0.002	<0.002	
4/18/2019							<0.002
9/27/2019	0.00286		0.00284				0.00206 (J)
9/30/2019				<0.002	<0.002	<0.002	
2/21/2020	<0.002		<0.002	<0.002			<0.002
2/22/2020					<0.002	<0.002	
10/30/2020	<0.002		<0.002	<0.002	<0.002	<0.002	
11/2/2020							<0.002

Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.0025	0.00048 (J)		0.0055	0.00094 (J)	<0.0025	0.0011 (J)
5/17/2016	0.00099 (J)				0.0007 (J)	<0.0025	0.001 (J)
5/18/2016		<0.0025		0.0059			
7/12/2016	0.00093 (J)						0.00091 (J)
7/13/2016		0.001 (J)		0.0048	0.0016 (J)	0.00042 (J)	
9/13/2016	0.0011 (J)					<0.0025	0.001 (J)
9/14/2016		0.00051 (J)		0.0063	0.0011 (J)		
11/19/2016	0.001 (J)	0.0005 (J)		0.0056	0.0012 (J)	<0.0025	0.00083 (J)
1/17/2017	0.00088 (J)	0.00049 (J)		0.0046			0.00091 (J)
1/18/2017					0.0011 (J)	<0.0025	
3/22/2017	0.001 (J)						0.00098 (J)
3/23/2017		0.00057 (J)		0.0049	0.0011 (J)	<0.0025	
5/24/2017	0.00093 (J)	0.00057 (J)		0.0052	0.0012 (J)	<0.0025	0.00098 (J)
3/28/2018	0.00092 (J)		0.00098 (J)	0.0063	0.00095 (J)	<0.0025	
3/29/2018							0.00063 (J)
6/2/2018	0.001 (J)		0.0009 (J)	0.0068	0.0012 (J)	<0.0025	0.00087 (J)
11/8/2018	0.001 (J)			0.0068	0.0011 (J)		
11/9/2018			0.00075 (J)			<0.0025	0.00076 (J)
2/11/2019	0.000768 (J)				0.00093 (J)	<0.0025	
2/12/2019			0.000896 (J)	0.00552			0.000661 (J)
4/17/2019	0.000825 (J)		0.00106 (J)	0.00603	0.00116 (J)	<0.0025	
4/18/2019							0.000705 (J)
9/27/2019	0.000783 (J)		0.000885 (J)				0.00071 (J)
9/30/2019				0.0062	0.001 (J)	<0.0025	
2/21/2020	0.00073 (J)		0.000909 (J)	0.00576			0.000634 (J)
2/22/2020					0.000907 (J)	<0.0025	
4/14/2020	0.000853 (J)		0.000899 (J)	0.00633	0.00105 (J)	<0.0025	0.000684 (J)
10/30/2020	0.000924 (J)		0.000972 (J)	0.00657	0.00102 (J)	<0.0025	
11/2/2020							0.000729 (J)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<5	<5		<5	<5	0.549	<5
5/17/2016	0.813				<5	0.551	<5
5/18/2016		0.471		<5			
7/12/2016	-0.00163 (U)						0.165 (U)
7/13/2016		0.401		0.27 (U)	0.0365 (U)	0.859	
9/13/2016	0.41 (U)					0.367 (U)	0.341 (U)
9/14/2016		-0.033 (U)		-0.0909 (U)	0.3 (U)		
11/19/2016	0.783	0.358		0.416	<5 (U)	<5 (U)	<5 (U)
1/17/2017	0.613	0.799		0.412 (U)			0.124 (U)
1/18/2017					0.235 (U)	0.289 (U)	
3/22/2017	0.241 (U)						0.0719 (U)
3/23/2017		0.182 (U)		0.0761 (U)	0.168 (U)	0.554	
5/24/2017	0.325	0.404		0.0415 (U)	-0.0607 (U)	0.831	0.441
3/28/2018	0.318 (U)		0.629	0.398	0.42	0.458	
3/29/2018							0.731
6/2/2018	0.222 (U)		-0.478 (U)	-0.253 (U)	0.0844 (U)	0.226 (U)	0.303 (U)
11/8/2018	0.117 (U)			0.343 (U)	0.367 (U)		
11/9/2018			0.179 (U)			0.298 (U)	0.00226 (U)
2/11/2019	0.493				0.0402 (U)	0.15 (U)	
2/12/2019			0.432	0.581			0.094 (U)
4/17/2019	0.729		0.648	0.646	0.493	0.326 (U)	
4/18/2019							0.48
9/27/2019	0.36 (U)		0.422 (U)				0.497
9/30/2019				1	0.404		
2/21/2020	0.268 (U)		0.23 (U)	0.126 (U)			0.375
2/22/2020					0.53	0.47	
4/14/2020	0.324 (U)		0.307 (U)	0.338	0.0408 (U)	0.376 (U)	0.329 (U)
10/30/2020	0.497		1.02	0.485	0.344	0.528	
11/2/2020							0.535

Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.1	<0.1		<0.1	0.04 (J)	0.06 (J)	<0.1
5/17/2016	<0.1				0.04 (J)	0.07 (J)	<0.1
5/18/2016		<0.1		<0.1			
7/12/2016	<0.1						<0.1
7/13/2016		<0.1		<0.1	0.05 (J)	0.08 (J)	
9/13/2016	<0.1					0.06 (J)	<0.1
9/14/2016		<0.1		<0.1	0.04 (J)		
11/19/2016	<0.1	<0.1		<0.1	0.04 (J)	0.06 (J)	<0.1
1/17/2017	<0.1	<0.1		<0.1			<0.1
1/18/2017					<0.1	0.05 (J)	
3/22/2017	<0.1						<0.1
3/23/2017		<0.1		<0.1	<0.1	0.05 (J)	
5/24/2017	<0.1	<0.1		<0.1	0.04 (J)	0.06 (J)	<0.1 (D)
10/16/2017	<0.1	<0.1		<0.1	<0.1	0.06 (J)	<0.1
3/28/2018	<0.1		<0.1	<0.1	0.04 (J)	0.06 (J)	
3/29/2018							<0.1
6/2/2018	<0.1		<0.1	<0.1	0.05 (J)	0.06 (J)	<0.1
11/8/2018	<0.1			<0.1	0.05 (J)		
11/9/2018			<0.1			0.06 (J)	<0.1
2/11/2019	<0.1				<0.1	0.0368 (J)	
2/12/2019			<0.1	<0.1			<0.1
4/17/2019	<0.1		<0.1	<0.1	0.033 (J)	0.0421 (J)	
4/18/2019							<0.1
9/27/2019	<0.1		0.0313 (J)				<0.1
9/30/2019				<0.1	<0.1	0.045 (J)	
2/21/2020	<0.1		<0.1	<0.1			<0.1
2/22/2020					0.0317 (J)	0.0434 (J)	
4/14/2020	0.0532 (J)		0.0537 (J)	0.034 (J)	0.0508 (J)	0.059 (J)	0.0415 (J)
10/30/2020	<0.1		<0.1	<0.1	<0.1	<0.1	
11/2/2020							<0.1

Time Series

Constituent: Lead (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.001	<0.001		<0.001	0.00039 (J)	<0.001	<0.001
5/17/2016	<0.001				<0.001	<0.001	<0.001
5/18/2016		<0.001		<0.001			
7/12/2016	<0.001						<0.001
7/13/2016		<0.001		<0.001	<0.001	<0.001	
9/13/2016	<0.001					<0.001	<0.001
9/14/2016		<0.001		0.00056 (J)	<0.001		
11/19/2016	<0.001	<0.001		<0.001	0.00042 (J)	<0.001	<0.001
1/17/2017	<0.001	<0.001		<0.001			<0.001
1/18/2017					<0.001	<0.001	
3/22/2017	<0.001						<0.001
3/23/2017		<0.001		0.00038 (J)	<0.001	<0.001	
5/24/2017	<0.001	<0.001		0.00036 (J)	<0.001	<0.001	<0.001
3/28/2018	<0.001		<0.001	<0.001	<0.001	<0.001	
3/29/2018							<0.001
11/8/2018	<0.001			<0.001	<0.001		
11/9/2018			<0.001			<0.001	<0.001
2/11/2019	<0.001				<0.001	<0.001	
2/12/2019			<0.001	0.000139 (J)			<0.001
4/17/2019	<0.001		<0.001	<0.001	<0.001	<0.001	
4/18/2019							<0.001
9/27/2019	<0.001		<0.001				0.000129 (J)
9/30/2019				0.000322 (J)	0.000191 (J)	0.000152 (J)	
2/21/2020	<0.001		<0.001	0.00015 (J)			<0.001
2/22/2020					<0.001	<0.001	
4/14/2020	<0.001		<0.001	0.000236 (J)	<0.001	<0.001	<0.001
10/30/2020	<0.001		<0.001	0.000136 (J)	<0.001	<0.001	
11/2/2020							<0.001

Time Series

Constituent: Lithium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.005	<0.005		<0.005	0.044	0.17	<0.005
5/17/2016	0.0037 (J)				0.028	0.2	<0.005
5/18/2016		<0.005		<0.005			
7/12/2016	0.012 (o)						<0.005
7/13/2016		<0.005		<0.005	0.026	0.17	
9/13/2016	<0.005					0.17	<0.005
9/14/2016		<0.005		<0.005	0.026		
11/19/2016	<0.005	<0.005		<0.005	0.026	0.18	0.0035 (J)
1/17/2017	<0.005	<0.005		<0.005			<0.005
1/18/2017					0.027	0.2	
3/22/2017	<0.005						<0.005
3/23/2017		<0.005		<0.005	0.024	0.19	
5/24/2017	<0.005	<0.005		<0.005	0.027	0.21	<0.005
3/28/2018	<0.005		0.0026 (J)	0.0023 (J)	0.021	0.23	
3/29/2018							0.0026 (J)
6/2/2018	0.0017 (J)		0.0021 (J)	0.002 (J)	0.022	0.19	0.0029 (J)
11/8/2018	0.0023 (J)			0.0024 (J)	0.025		
11/9/2018			0.0024 (J)			0.18	0.0027 (J)
2/11/2019	<0.005				0.0229	0.161	
2/12/2019			<0.005	<0.005			<0.005
4/17/2019	0.00229 (J)		0.00191 (J)	0.00197 (J)	0.0236	0.174	
4/18/2019							0.00238 (J)
9/27/2019	0.00346 (J)		<0.005				0.00375 (J)
9/30/2019				0.00687	0.0249	0.166	
2/21/2020	<0.005		<0.005	<0.005			<0.005
2/22/2020					0.0211	0.169	
4/14/2020	0.00505		<0.005	<0.005	0.0224	0.192	<0.005
10/30/2020	<0.005		<0.005	<0.005	0.0267	0.194	
11/2/2020							<0.005

Time Series

Constituent: Mercury (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.0002	<0.0002		8.4E-05 (JB)	7.3E-05 (JB)	7.4E-05 (JB)	7.1E-05 (JB)
5/17/2016	<0.0002				<0.0002	<0.0002	<0.0002
5/18/2016		<0.0002		<0.0002			
7/12/2016	<0.0002						<0.0002
7/13/2016		<0.0002		<0.0002	<0.0002	<0.0002	
9/13/2016	<0.0002					<0.0002	<0.0002
9/14/2016		<0.0002		<0.0002	<0.0002		
11/19/2016	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
1/17/2017	<0.0002	<0.0002		<0.0002			<0.0002
1/18/2017					<0.0002	<0.0002	
3/22/2017	0.00011 (J)						<0.0002
3/23/2017		0.00013 (J)		0.00013 (J)	0.00013 (J)	<0.0002	
5/24/2017	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
3/28/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	
3/29/2018							<0.0002
2/11/2019	<0.0002				<0.0002	<0.0002	
2/12/2019			<0.0002	<0.0002			<0.0002
4/17/2019	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	
4/18/2019							<0.0002
2/21/2020	<0.0002		<0.0002	<0.0002			<0.0002
2/22/2020					<0.0002	<0.0002	
10/30/2020	<0.0002		<0.0002	0.000497	<0.0002	<0.0002	
11/2/2020							<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.015	0.0019 (J)		<0.015	<0.015	0.0026 (J)	<0.015
5/17/2016	<0.015				<0.015	0.0011 (J)	<0.015
5/18/2016		0.00096 (J)		<0.015			
7/12/2016	<0.015						<0.015
7/13/2016		0.0017 (J)		<0.015	<0.015	0.0079 (J)	
9/13/2016	<0.015					0.0038 (J)	<0.015
9/14/2016		0.0018 (J)		<0.015	<0.015		
11/19/2016	<0.015	<0.015		<0.015	<0.015	0.0014 (J)	<0.015
1/17/2017	<0.015	<0.015		<0.015			<0.015
1/18/2017					<0.015	0.001 (J)	
3/22/2017	<0.015						0.0038 (J)
3/23/2017		<0.015		<0.015	<0.015	<0.015	
5/24/2017	<0.015	<0.015		<0.015	<0.015	0.0014 (J)	<0.015
3/28/2018	<0.015		<0.015	<0.015	<0.015	<0.015	
3/29/2018							<0.015
11/8/2018	<0.015			<0.015	<0.015		
11/9/2018			<0.015			<0.015	<0.015
2/11/2019	<0.015				<0.015	<0.015	
2/12/2019			<0.015	<0.015			<0.015
4/17/2019	<0.015		<0.015	<0.015	<0.015	<0.015	
4/18/2019							<0.015
2/21/2020	<0.015		<0.015	<0.015			<0.015
2/22/2020					0.000616 (J)	0.000627 (J)	
4/14/2020	<0.015		<0.015	<0.015	<0.015	0.000747 (J)	<0.015
10/30/2020	<0.015		<0.015	<0.015	<0.015	<0.015	
11/2/2020							<0.015

Time Series

Constituent: pH (SU) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	5.12	5.52		5.05	5.38	6.64	4.89
5/17/2016	5.23				5.32	6.52	4.92
5/18/2016		5.24		4.86			
7/12/2016	5.77						4.93
7/13/2016		5.17		5.11	5.31	6.63	
9/13/2016	4.98					6.46	4.76
9/14/2016		5.04		4.84	5.21		
11/19/2016	4.82	4.88		4.74	5.12	6.38	4.56
1/17/2017	5.04	5.04		4.95			4.86
1/18/2017					5.22	6.47	
3/22/2017	4.73						4.66
3/23/2017		4.66		4.66	5.01	6.19	
5/24/2017	5.01	4.93		4.86	5.19	6.34	4.83
10/16/2017	4.59	4.65		4.47	4.96	6.23	4.53
3/28/2018	4.87		5.39	4.93	5.23	6.22	
3/29/2018							4.87
6/2/2018	4.92		5.06	4.83	5.22	6.24	4.87
11/8/2018	5			4.83	5.29		
11/9/2018			4.92			6.27	4.92
2/11/2019	4.7				5	6.08	
2/12/2019			4.86	4.65			4.79
4/17/2019	4.9		4.79	4.71	5.13	6.14	
4/18/2019							4.9
2/21/2020	4.86		4.73	4.55			4.8
2/22/2020					5.3	6.13	
4/14/2020	5.23		4.87	4.7	5.45	6.26	4.94
10/30/2020	5		4.87	4.8	5.32	6.19	
11/2/2020							4.92

Time Series

Constituent: Selenium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.005	0.00041 (J)		0.00033 (J)	<0.005	<0.005	<0.005
5/17/2016	<0.005				<0.005	<0.005	0.00026 (J)
5/18/2016		<0.005		<0.005			
7/12/2016	<0.005						<0.005
7/13/2016		<0.005		0.00041 (J)	<0.005	<0.005	
9/13/2016	<0.005					<0.005	0.00031 (J)
9/14/2016		<0.005		0.00079 (J)	<0.005		
11/19/2016	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1/17/2017	<0.005	<0.005		<0.005			<0.005
1/18/2017					<0.005	<0.005	
3/22/2017	<0.005						0.0021
3/23/2017		<0.005		<0.005	<0.005	<0.005	
5/24/2017	<0.005	0.00026 (J)		0.00028 (J)	<0.005	0.00033 (J)	0.00026 (J)
3/28/2018	<0.005		0.00024 (J)	0.00038 (J)	<0.005	<0.005	
3/29/2018							0.00036 (J)
6/2/2018	0.00064 (J)		<0.005	0.00031 (J)	<0.005	<0.005	<0.005
11/8/2018	0.0025			0.00088 (J)	<0.005		
11/9/2018			0.00098 (J)			<0.005	<0.005
2/11/2019	<0.005				<0.005	<0.005	
2/12/2019			<0.005	<0.005			<0.005
4/17/2019	<0.005		<0.005	<0.005	<0.005	<0.005	
4/18/2019							<0.005
2/21/2020	<0.005		<0.005	<0.005			<0.005
2/22/2020					<0.005	<0.005	
10/30/2020	<0.005		<0.005	<0.005	<0.005	<0.005	
11/2/2020							<0.005

Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<5	<5		<5	2.3 (J)	4.5 (J)	<5
5/17/2016	<5				2.3 (J)	17	<5
5/18/2016		<5		<5			
7/12/2016	<5						<5
7/13/2016		<5		1.5 (J)	2.4 (J)	15	
9/13/2016	<5					3.4 (J)	<5
9/14/2016		<5		1.6 (J)	2.4 (J)		
11/19/2016	<5	<5		1.8 (J)	3.3 (J)	3.5 (J)	1.5 (J)
1/17/2017	<5	<5		<5			<5
1/18/2017					2.3 (J)	3.2 (J)	
3/22/2017	<5						1.9 (J)
3/23/2017		1.8 (J)		2.3 (J)	3.2 (J)	3.7 (J)	
5/24/2017	<5	1.5 (J)		1.6 (J)	2.4 (J)	8.8	<5
10/16/2017	<5	<5		<5	2 (J)	4 (J)	<5
3/28/2018	<5		1.7 (J)	1.6 (J)	2.4 (J)	3.3 (J)	
3/29/2018							<5
6/2/2018	1.9 (J)		3 (J)	2.9 (J)	3.7 (J)	4.3 (J)	2.8 (J)
11/8/2018	<5			1.6 (J)	2.7 (J)		
11/9/2018			<5			2.3 (J)	<5
2/11/2019	0.774 (J)				2.5	2.64	
2/12/2019			1.97	1.97			1.35
4/17/2019	1.43		2.82	2.5	3.15	3.27	
4/18/2019							1.82
9/27/2019	1.03		2.19				1.22
9/30/2019				1.64	2.34	2.82	
4/14/2020	0.928 (J)		2.71	1.62	2.99	4.2	1.18
10/30/2020	0.91 (J)		3.97	1.44	2.84	4.76	
11/2/2020							1.08

Time Series

Constituent: Thallium (mg/L) Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
5/17/2016	<0.001				<0.001	<0.001	<0.001
5/18/2016		<0.001		<0.001			
7/12/2016	<0.001						<0.001
7/13/2016		<0.001		<0.001	<0.001	<0.001	
9/13/2016	<0.001					<0.001	<0.001
9/14/2016		<0.001		9.5E-05 (J)	<0.001		
11/19/2016	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
1/17/2017	<0.001	<0.001		<0.001			<0.001
1/18/2017					<0.001	<0.001	
3/22/2017	<0.001						<0.001
3/23/2017		<0.001		<0.001	<0.001	<0.001	
5/24/2017	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
3/28/2018	<0.001		<0.001	<0.001	<0.001	<0.001	
3/29/2018							<0.001
11/8/2018	<0.001			8.5E-05 (J)	<0.001		
11/9/2018			<0.001			<0.001	<0.001
2/11/2019	<0.001				<0.001	<0.001	
2/12/2019			<0.001	<0.001			<0.001
4/17/2019	<0.001		<0.001	<0.001	<0.001	<0.001	
4/18/2019							<0.001
2/21/2020	<0.001		0.000486 (J)	0.000276 (J)			<0.001
2/22/2020					<0.001	<0.001	
4/14/2020	<0.001		<0.001	0.000158 (J)	<0.001	<0.001	<0.001
10/30/2020	<0.001		<0.001	<0.001	<0.001	<0.001	
11/2/2020							<0.001

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/20/2021 4:33 PM

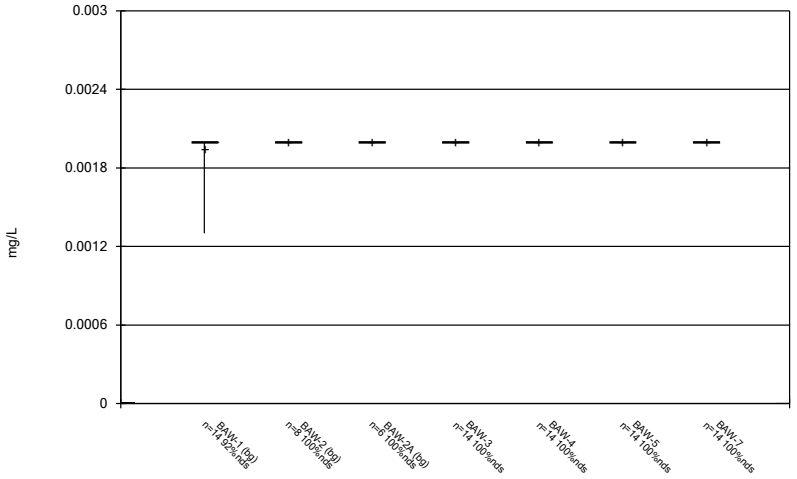
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-2 (bg)	BAW-2A (bg)	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	20	30		30	46	88	22
5/17/2016	24				52	110	30
5/18/2016		20		20			
7/12/2016	24						26
7/13/2016		40		40	36	120	
9/13/2016	18					92	28
9/14/2016		10		<10	38		
11/19/2016	20	28		22	50	94	38
1/17/2017	<10	14		14			10
1/18/2017					18	68	
3/22/2017	12						22
3/23/2017		16		28	32	80	
5/24/2017	16 (D)	12		18	32	90	22
10/16/2017	58	50		36	64	110	34
3/28/2018	18		30	36	56	86	
3/29/2018							50
6/2/2018	6		26	6	22	72	<10
11/8/2018	12			34	170		
11/9/2018			94			38	20
2/11/2019	<10				23	60	
2/12/2019			22	12			<10
4/17/2019	16		22	27	37	82	
4/18/2019							39
9/27/2019	26		25				<10
9/30/2019				<10	<10	55	
4/14/2020	25		38	31	30	77	24
10/30/2020	34		48	40	40	88	
11/2/2020							28

FIGURE B.

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

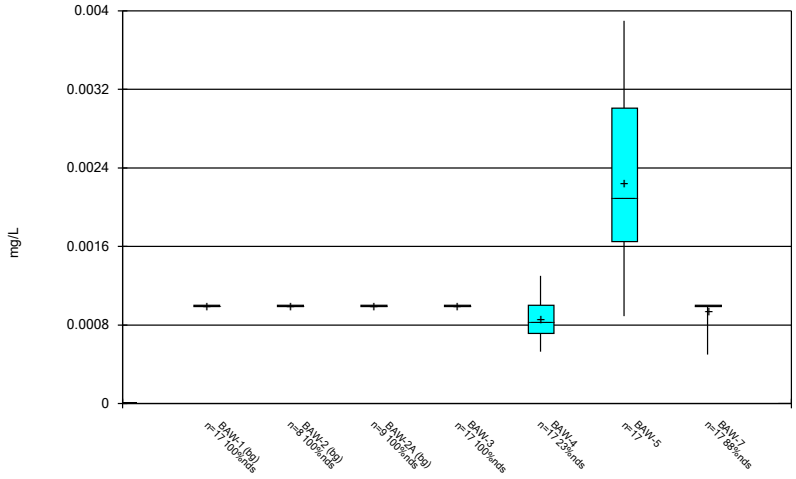


Constituent: Antimony Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

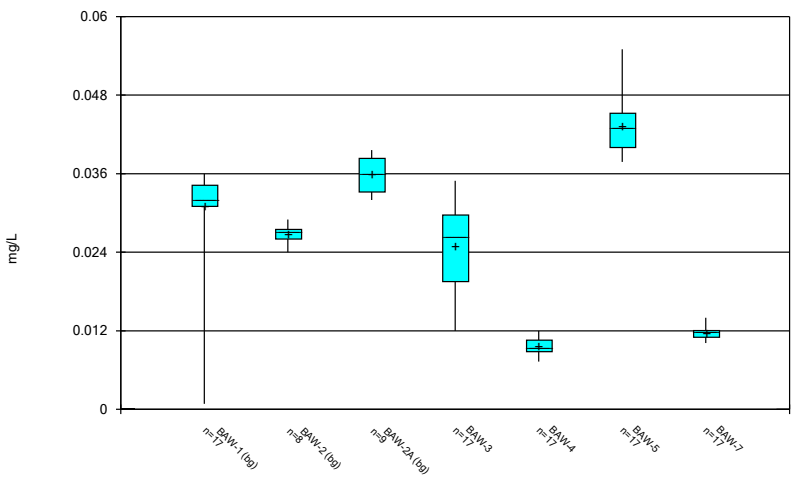


Constituent: Arsenic Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

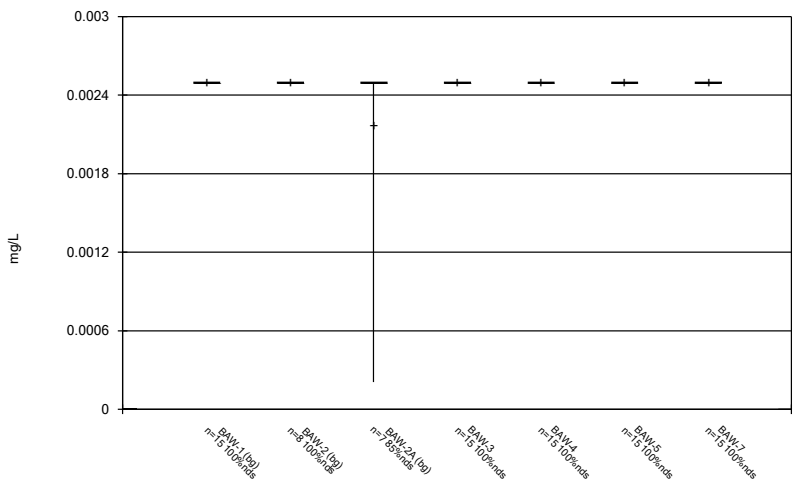


Constituent: Barium Analysis Run 1/20/2021 4:33 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

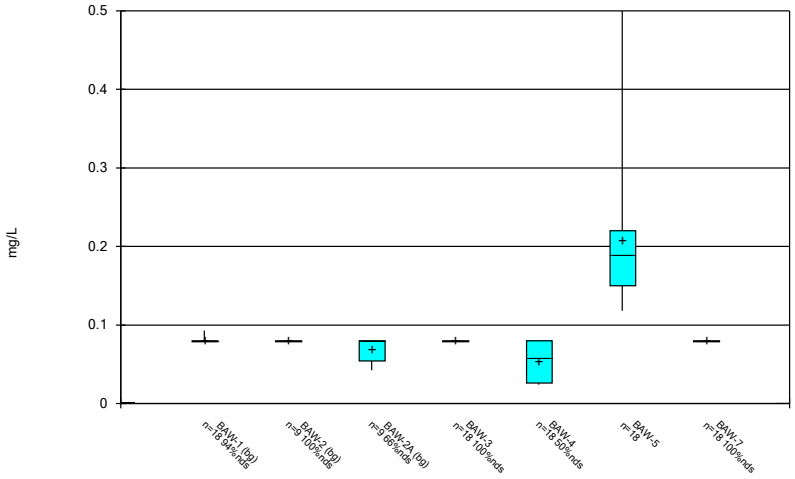
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 1/20/2021 4:33 PM

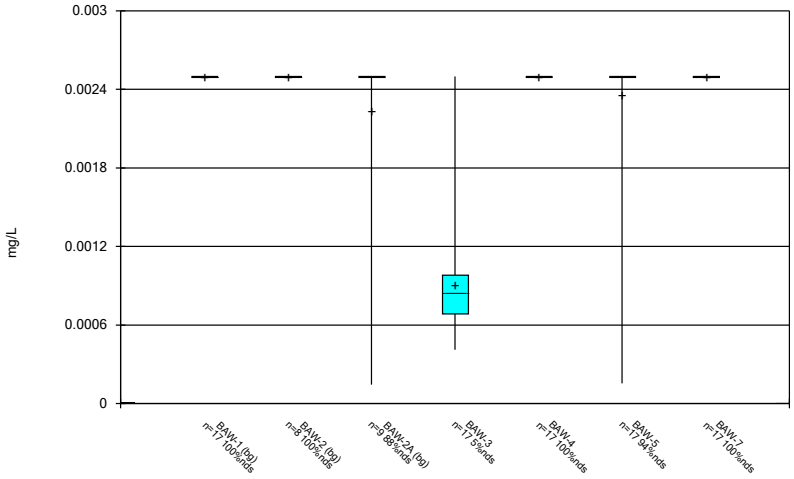
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



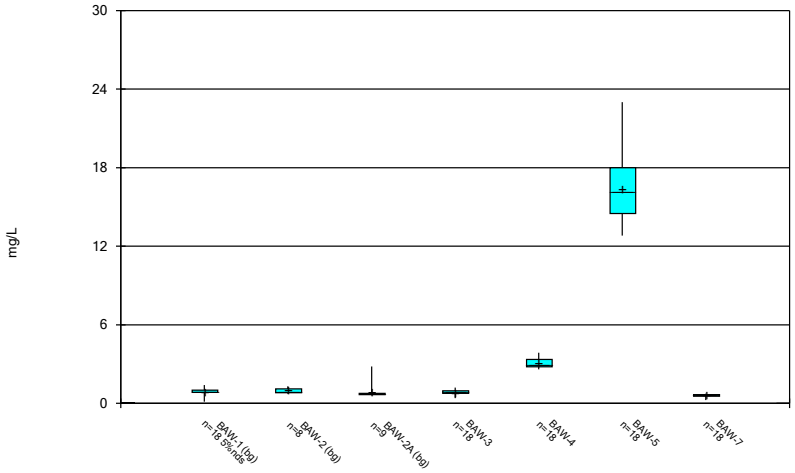
Constituent: Boron Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



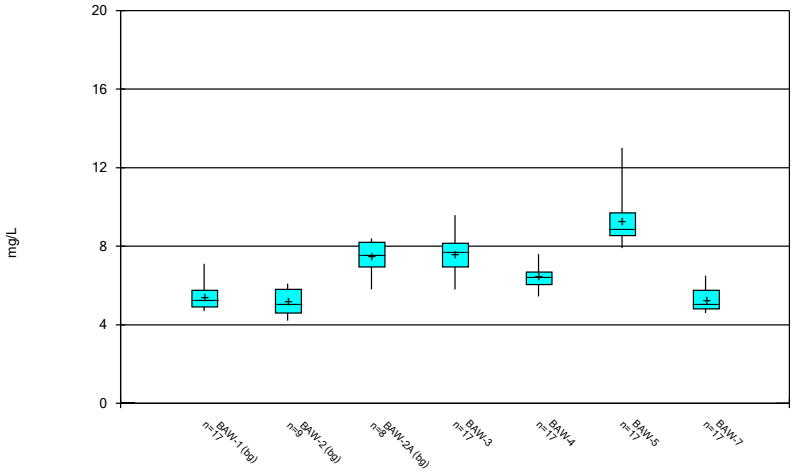
Constituent: Cadmium Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

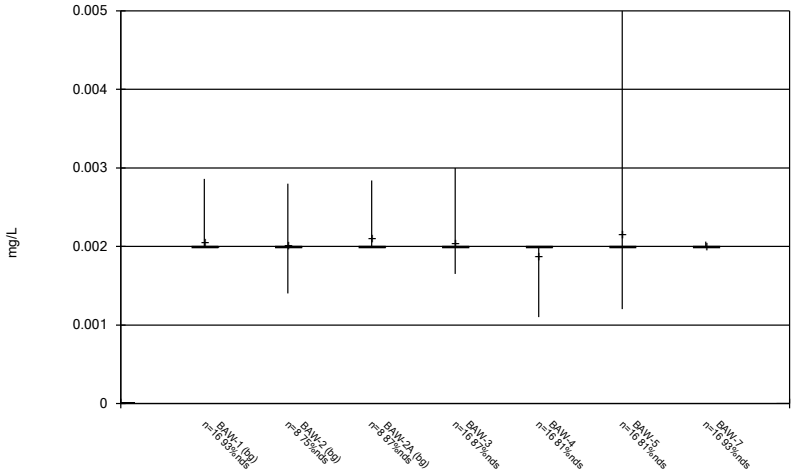
Box & Whiskers Plot



Constituent: Chloride Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

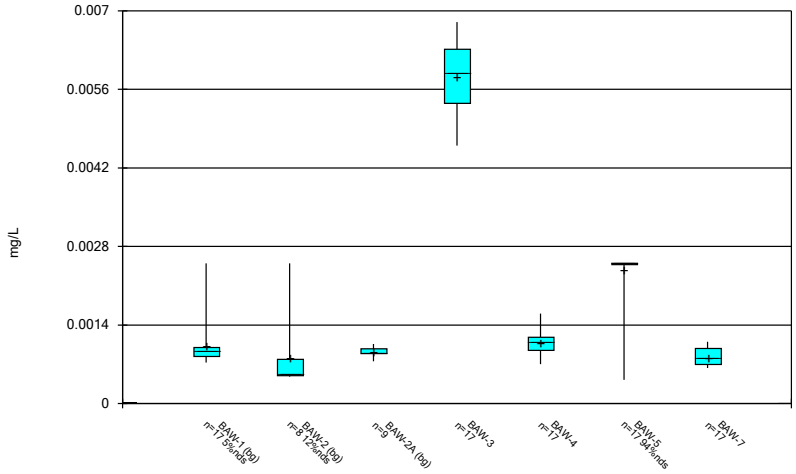


Constituent: Chromium Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

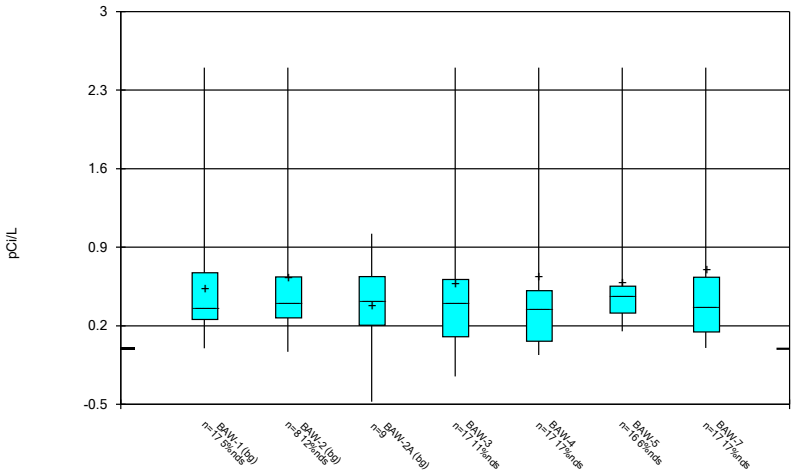


Constituent: Cobalt Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

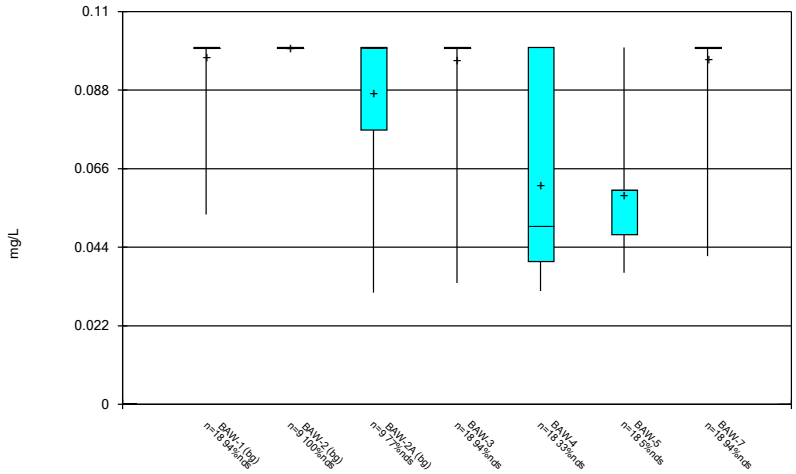


Constituent: Combined Radium 226 + 228 Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

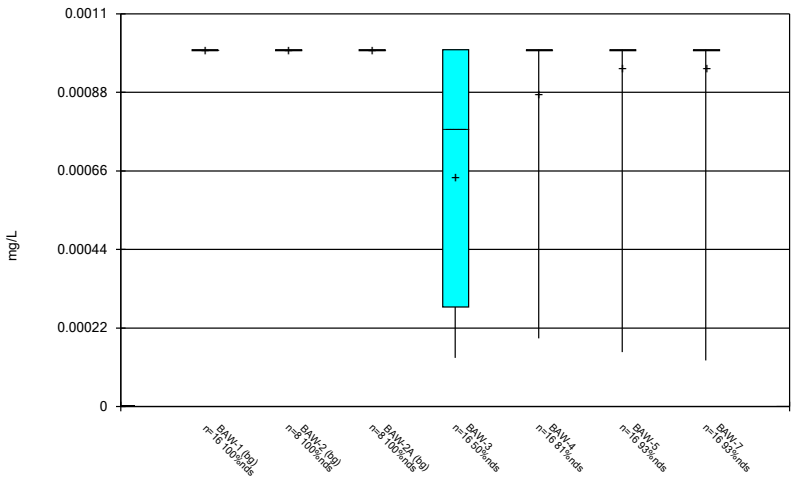


Constituent: Fluoride Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

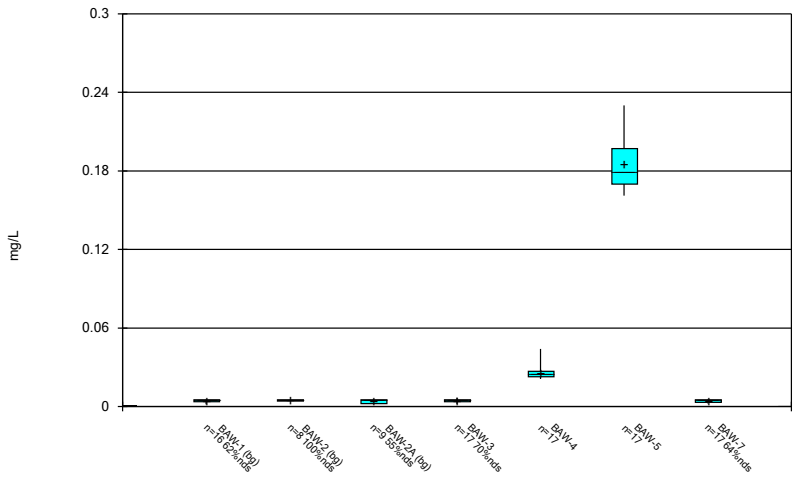


Constituent: Lead Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

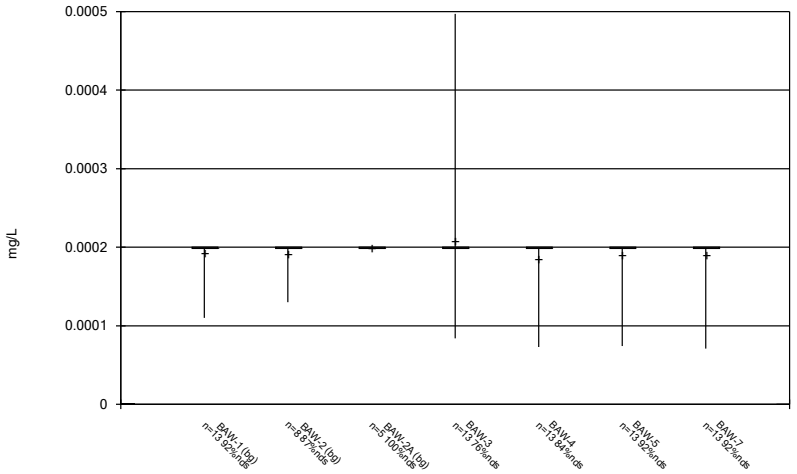


Constituent: Lithium Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

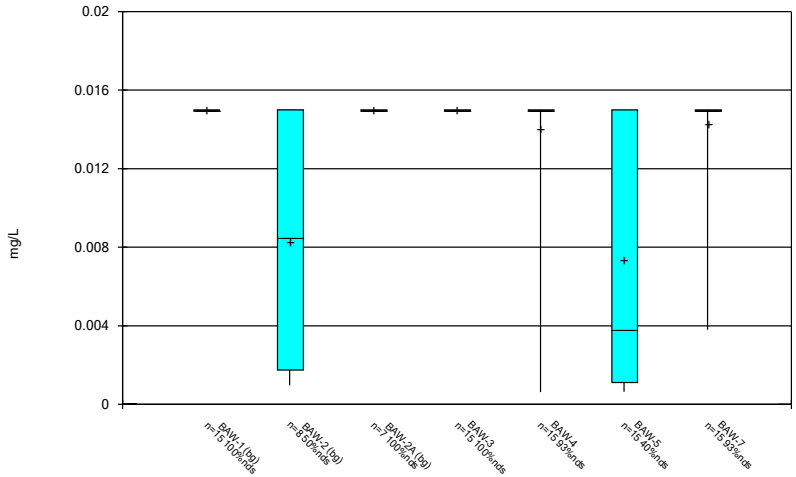


Constituent: Mercury Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

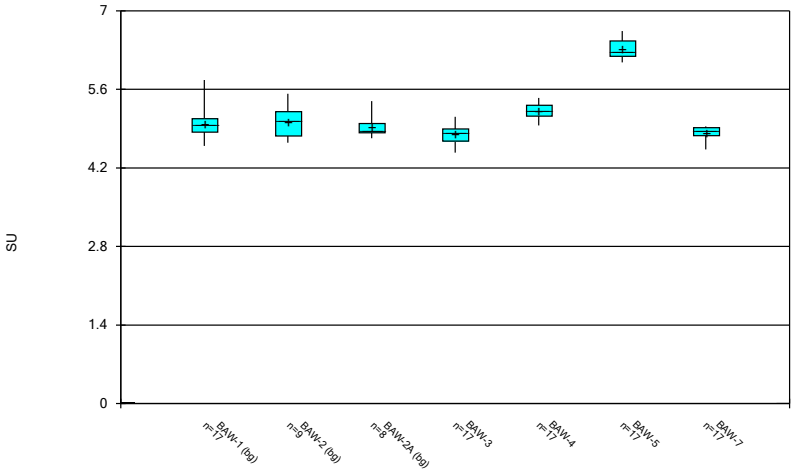
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 1/20/2021 4:34 PM

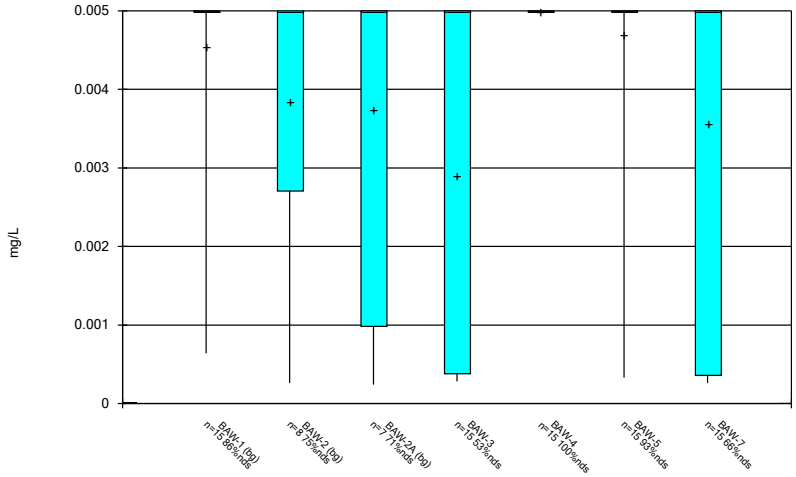
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



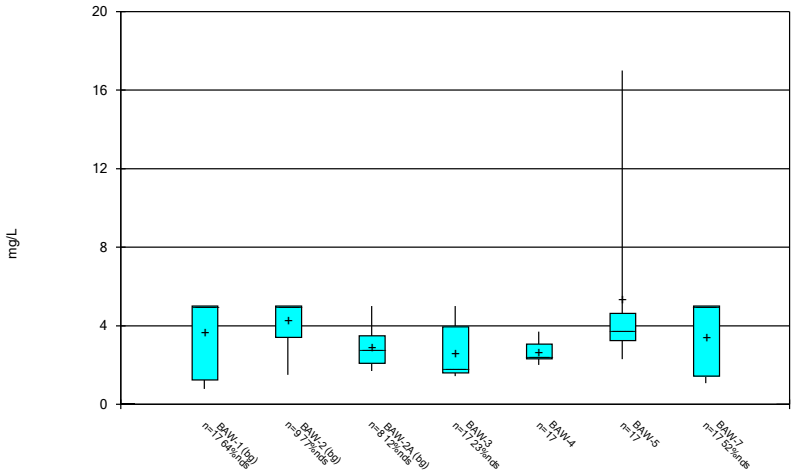
Constituent: pH Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



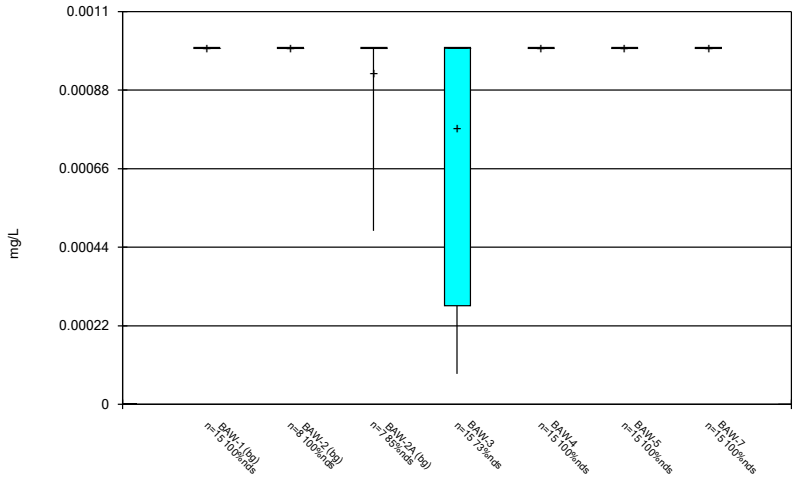
Constituent: Selenium Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



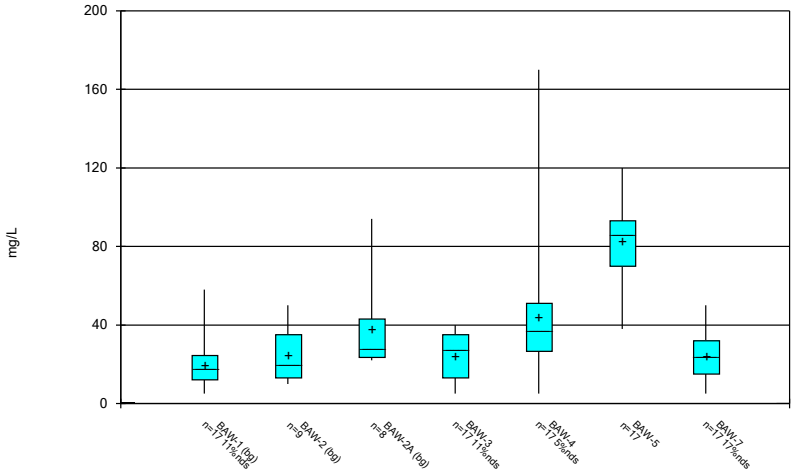
Constituent: Sulfate Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



Constituent: Thallium Analysis Run 1/20/2021 4:34 PM
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:34 PM

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

FIGURE C.

Outlier Summary

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:18 PM

	BAW-2 Calcium (mg/L)	BAW-1 Lithium (mg/L)
3/23/2016	2.6 (o)	
7/12/2016		0.012 (o)

FIGURE D.

Appendix III Interwell Prediction Limits (April 2020) - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**4/14/2020**	**0.209**	**Yes**	**34**	**n/a**	**n/a**	**91.18**	**n/a**	**n/a**	**0.001565**	**NP Inter (NDs) 1 of 2**
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**4/14/2020**	**2.95**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**4/14/2020**	**15.7**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**BAW-3**	**7.98**	**n/a**	**4/14/2020**	**8.75**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	**BAW-5**	**7.98**	**n/a**	**4/14/2020**	**8.71**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
pH (SU)	**BAW-5**	**5.466**	**4.504**	**4/14/2020**	**6.26**	**Yes**	**32**	**4.985**	**0.2576**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**BAW-5**	**57.39**	**n/a**	**4/14/2020**	**77**	**Yes**	**32**	**4.707**	**1.536**	**6.25**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**

Appendix III Interwell Prediction Limits (April 2020) - All Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:40 PM

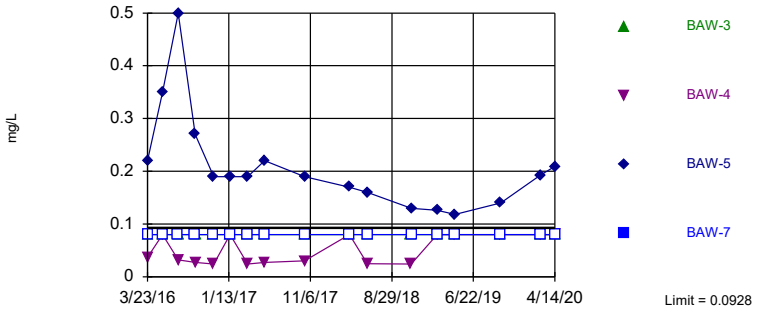
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BAW-3	0.0928	n/a	4/14/2020	0.08ND	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-4	0.0928	n/a	4/14/2020	0.08ND	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**4/14/2020**	**0.209**	**Yes**	**34**	**n/a**	**n/a**	**91.18**	**n/a**	**n/a**	**0.001565**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	BAW-7	0.0928	n/a	4/14/2020	0.08ND	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BAW-3	2.8	n/a	4/14/2020	0.811	No	33	n/a	n/a	3.03	n/a	n/a	0.001663	NP Inter (normality) 1 of 2
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**4/14/2020**	**2.95**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**4/14/2020**	**15.7**	**Yes**	**33**	**n/a**	**n/a**	**3.03**	**n/a**	**n/a**	**0.001663**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	BAW-7	2.8	n/a	4/14/2020	0.532	No	33	n/a	n/a	3.03	n/a	n/a	0.001663	NP Inter (normality) 1 of 2
Chloride (mg/L)	**BAW-3**	**7.98**	**n/a**	**4/14/2020**	**8.75**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-4	7.98	n/a	4/14/2020	5.93	No	32	2.397	0.229	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Chloride (mg/L)	**BAW-5**	**7.98**	**n/a**	**4/14/2020**	**8.71**	**Yes**	**32**	**2.397**	**0.229**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-7	7.98	n/a	4/14/2020	4.68	No	32	2.397	0.229	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Fluoride (mg/L)	BAW-3	0.1	n/a	4/14/2020	0.034J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-4	0.1	n/a	4/14/2020	0.0508J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-5	0.1	n/a	4/14/2020	0.059J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-7	0.1	n/a	4/14/2020	0.0415J	No	34	n/a	n/a	91.18	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
pH (SU)	BAW-3	5.466	4.504	4/14/2020	4.7	No	32	4.985	0.2576	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	BAW-4	5.466	4.504	4/14/2020	5.45	No	32	4.985	0.2576	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	**BAW-5**	**5.466**	**4.504**	**4/14/2020**	**6.26**	**Yes**	**32**	**4.985**	**0.2576**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
pH (SU)	BAW-7	5.466	4.504	4/14/2020	4.94	No	32	4.985	0.2576	0	None	No	0.0009398	Param Inter 1 of 2
Sulfate (mg/L)	BAW-3	5	n/a	4/14/2020	1.62	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-4	5	n/a	4/14/2020	2.99	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-5	5	n/a	4/14/2020	4.2	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-7	5	n/a	4/14/2020	1.18	No	32	n/a	n/a	59.38	n/a	n/a	0.001761	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	BAW-3	57.39	n/a	4/14/2020	31	No	32	4.707	1.536	6.25	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-4	57.39	n/a	4/14/2020	30	No	32	4.707	1.536	6.25	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**BAW-5**	**57.39**	**n/a**	**4/14/2020**	**77**	**Yes**	**32**	**4.707**	**1.536**	**6.25**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	BAW-7	57.39	n/a	4/14/2020	24	No	32	4.707	1.536	6.25	None	sqrt(x)	0.00188	Param Inter 1 of 2

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Exceeds Limit: BAW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 91.18% NDs. Annual per-constituent alpha = 0.01245. Individual comparison alpha = 0.001565 (1 of 2). Comparing 4 points to limit.

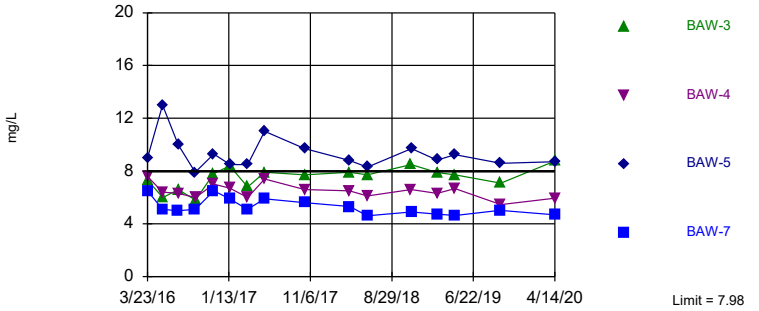
Constituent: Boron Analysis Run 1/20/2021 4:39 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Exceeds Limit: BAW-3, BAW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=2.397, Std. Dev.=0.229, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9131, critical = 0.904. Kappa = 1.868 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

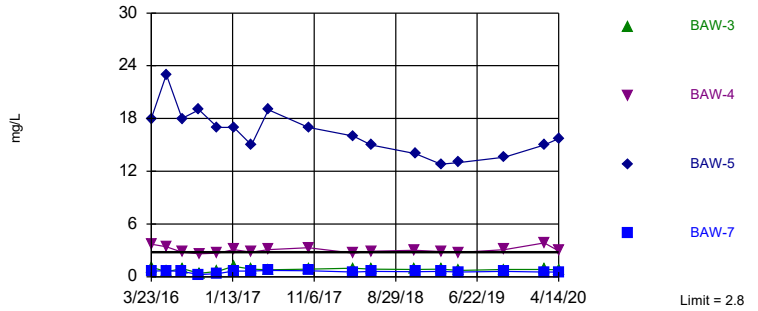
Constituent: Chloride Analysis Run 1/20/2021 4:39 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Exceeds Limit: BAW-4, BAW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 33 background values. 3.03% NDs. Annual per-constituent alpha = 0.01323. Individual comparison alpha = 0.001663 (1 of 2). Comparing 4 points to limit.

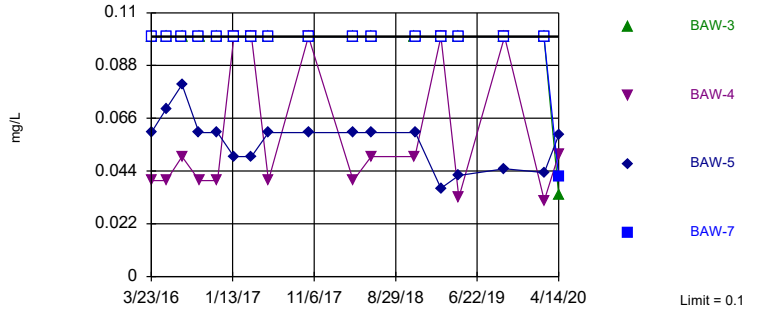
Constituent: Calcium Analysis Run 1/20/2021 4:39 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

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 34 background values. 91.18% NDs. Annual per-constituent alpha = 0.01245. Individual comparison alpha = 0.001565 (1 of 2). Comparing 4 points to limit.

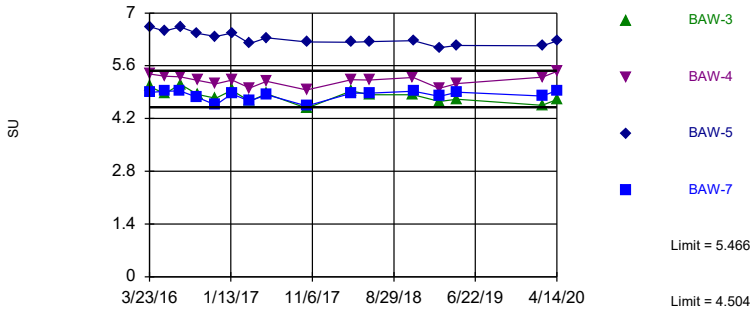
Constituent: Fluoride Analysis Run 1/20/2021 4:39 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Exceeds Limits: BAW-5

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=4.985, Std. Dev.=0.2576, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9319, critical = 0.904. Kappa = 1.868 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009398. Comparing 4 points to limit.

Constituent: pH Analysis Run 1/20/2021 4:39 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

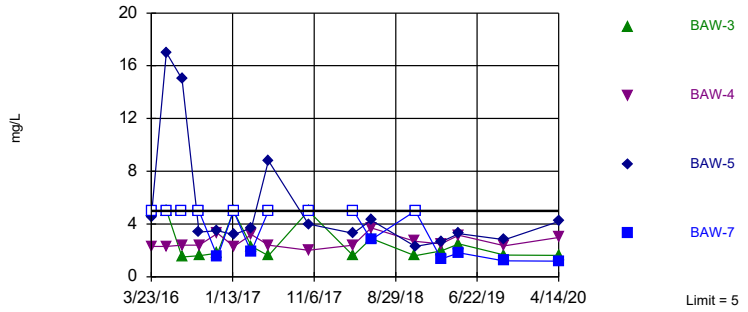
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

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 32 background values. 59.38% NDs. Annual per-constituent alpha = 0.014. Individual comparison alpha = 0.001761 (1 of 2). Comparing 4 points to limit.

Constituent: Sulfate Analysis Run 1/20/2021 4:39 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

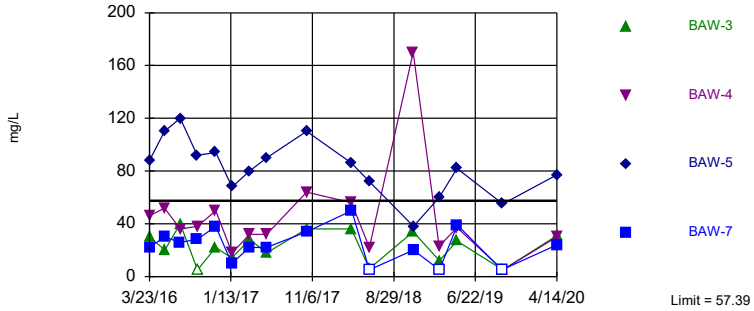
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Exceeds Limit: BAW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=4.707, Std. Dev.=1.536, n=32, 6.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9254, critical = 0.904. Kappa = 1.868 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:39 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-5	BAW-2 (bg)	BAW-3	BAW-7	BAW-2A (bg)
3/23/2016	<0.08	0.037 (J)	0.22	<0.08	<0.08	<0.08	
5/17/2016	<0.08	<0.08	0.35			<0.08	
5/18/2016				<0.08	<0.08		
7/12/2016	<0.08					<0.08	
7/13/2016		0.032 (J)	0.5	<0.08	<0.08		
9/13/2016	<0.08		0.27			<0.08	
9/14/2016		0.027 (J)		<0.08	<0.08		
11/19/2016	<0.08	0.024 (J)	0.19	<0.08	<0.08	<0.08	
1/17/2017	<0.08			<0.08	<0.08	<0.08	
1/18/2017		<0.08	0.19				
3/22/2017	<0.08					<0.08	
3/23/2017		0.024 (J)	0.19	<0.08	<0.08		
5/24/2017	<0.08	0.027 (J)	0.22	<0.08	<0.08	<0.08	
10/16/2017	<0.08	0.03 (J)	0.19	<0.08	<0.08	<0.08	
3/28/2018	<0.08	<0.08	0.17		<0.08		<0.08
3/29/2018						<0.08	
6/2/2018	<0.08	0.025 (J)	0.16		<0.08	<0.08	<0.08
11/8/2018	<0.08	0.024 (J)			<0.08		
11/9/2018			0.13			<0.08	<0.08
2/11/2019	<0.08	<0.08	0.126				
2/12/2019					<0.08	<0.08	<0.08
4/17/2019	<0.08	<0.08	0.118		<0.08		<0.08
4/18/2019						<0.08	
9/27/2019	<0.08					<0.08	<0.08
9/30/2019		<0.08	0.14		<0.08		
2/21/2020	0.0928				<0.08	<0.08	0.0589 (J)
2/22/2020		<0.08	0.193				
4/14/2020	<0.08	<0.08	0.209		<0.08	<0.08	0.0424 (J)

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-7	BAW-5	BAW-3	BAW-4	BAW-2 (bg)	BAW-2A (bg)
3/23/2016	<0.25	0.65	18	1.1	3.7	2.6 (o)	
5/17/2016	0.84	0.68	23		3.4		
5/18/2016				0.56		1.3	
7/12/2016	0.79	0.62					
7/13/2016			18	0.95	2.8	1.1	
9/13/2016	0.42	0.25	19				
9/14/2016				0.4	2.6	1.1	
11/19/2016	1.2	0.36	17	0.62	2.7	1	
1/17/2017	1.4	0.66		1.2		0.87	
1/18/2017			17		3.1		
3/22/2017	0.95	0.65					
3/23/2017			15	0.87	2.8	0.74	
5/24/2017	1.3	0.72	19	0.81	3.1	0.84	
10/16/2017	0.93	0.7	17	0.86	3.3	0.76	
3/28/2018	1		16	0.97	2.7		2.8
3/29/2018		0.55					
6/2/2018	0.93	0.6	15	0.86	2.9		0.71
11/8/2018	1			0.84	3		
11/9/2018		0.59	14				0.61
2/11/2019	1		12.8		2.88		
2/12/2019		0.608		0.856			0.757
4/17/2019	0.893		13	0.711	2.77		0.755
4/18/2019		0.55					
9/27/2019	0.8	0.598					0.663
9/30/2019			13.6	0.826	3.08		
2/21/2020	1.02	0.552		0.841			0.648
2/22/2020			15		3.86		
4/14/2020	0.887	0.532	15.7	0.811	2.95		0.67

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-3	BAW-7	BAW-2 (bg)	BAW-5	BAW-2A (bg)
3/23/2016	6.5	7.6	7.3	6.5	5.1	9	
5/17/2016	4.9	6.4		5.1		13	
5/18/2016			6		4.2		
7/12/2016	5.3			5			
7/13/2016		6.3	6.6		4.7	10	
9/13/2016	4.8 (F1)			5.1		7.9	
9/14/2016		6	5.8		4.5		
11/19/2016	7.1	7	7.8	6.5	6.1	9.3	
1/17/2017	5.8		8.4	5.9	5.4		
1/18/2017		6.7				8.5	
3/22/2017	4.9			5.1			
3/23/2017		6	6.8		5.1	8.5	
5/24/2017	5.9	7.4	7.9	5.9	5.5	11	
10/16/2017	5.7	6.6	7.7	5.6	6.1	9.7	
3/28/2018	5.7	6.5	7.9			8.8	6.7
3/29/2018				5.3			
6/2/2018	4.7	6.1	7.7	4.6		8.3	5.8
11/8/2018	5.6	6.6	8.5				
11/9/2018				4.9		9.7	7.2
2/11/2019	4.84	6.31				8.84	
2/12/2019			7.89	4.72			8.4
4/17/2019	4.99	6.68	7.71			9.24	8.03
4/18/2019				4.64			
9/27/2019	5.08			5.02			8.37
9/30/2019		5.45	7.07			8.59	
4/14/2020	4.91	5.93	8.75	4.68		8.71	7.57

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-5	BAW-2 (bg)	BAW-3	BAW-7	BAW-2A (bg)
3/23/2016	<0.1	0.04 (J)	0.06 (J)	<0.1	<0.1	<0.1	
5/17/2016	<0.1	0.04 (J)	0.07 (J)			<0.1	
5/18/2016				<0.1	<0.1		
7/12/2016	<0.1					<0.1	
7/13/2016		0.05 (J)	0.08 (J)	<0.1	<0.1		
9/13/2016	<0.1		0.06 (J)			<0.1	
9/14/2016		0.04 (J)		<0.1	<0.1		
11/19/2016	<0.1	0.04 (J)	0.06 (J)	<0.1	<0.1	<0.1	
1/17/2017	<0.1			<0.1	<0.1	<0.1	
1/18/2017		<0.1	0.05 (J)				
3/22/2017	<0.1					<0.1	
3/23/2017		<0.1	0.05 (J)	<0.1	<0.1		
5/24/2017	<0.1	0.04 (J)	0.06 (J)	<0.1	<0.1	<0.1 (D)	
10/16/2017	<0.1	<0.1	0.06 (J)	<0.1	<0.1	<0.1	
3/28/2018	<0.1	0.04 (J)	0.06 (J)		<0.1		<0.1
3/29/2018						<0.1	
6/2/2018	<0.1	0.05 (J)	0.06 (J)		<0.1	<0.1	<0.1
11/8/2018	<0.1	0.05 (J)			<0.1		
11/9/2018			0.06 (J)			<0.1	<0.1
2/11/2019	<0.1	<0.1	0.0368 (J)				
2/12/2019					<0.1	<0.1	<0.1
4/17/2019	<0.1	0.033 (J)	0.0421 (J)		<0.1		<0.1
4/18/2019						<0.1	
9/27/2019	<0.1					<0.1	0.0313 (J)
9/30/2019		<0.1	0.045 (J)		<0.1		
2/21/2020	<0.1				<0.1	<0.1	<0.1
2/22/2020		0.0317 (J)	0.0434 (J)				
4/14/2020	0.0532 (J)	0.0508 (J)	0.059 (J)		0.034 (J)	0.0415 (J)	0.0537 (J)

Prediction Limit

Constituent: pH (SU) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-3	BAW-7	BAW-2 (bg)	BAW-5	BAW-2A (bg)
3/23/2016	5.12	5.38	5.05	4.89	5.52	6.64	
5/17/2016	5.23	5.32		4.92		6.52	
5/18/2016			4.86		5.24		
7/12/2016	5.77			4.93			
7/13/2016		5.31	5.11		5.17	6.63	
9/13/2016	4.98			4.76		6.46	
9/14/2016		5.21	4.84		5.04		
11/19/2016	4.82	5.12	4.74	4.56	4.88	6.38	
1/17/2017	5.04		4.95	4.86	5.04		
1/18/2017		5.22				6.47	
3/22/2017	4.73			4.66			
3/23/2017		5.01	4.66		4.66	6.19	
5/24/2017	5.01	5.19	4.86	4.83	4.93	6.34	
10/16/2017	4.59	4.96	4.47	4.53	4.65	6.23	
3/28/2018	4.87	5.23	4.93			6.22	5.39
3/29/2018				4.87			
6/2/2018	4.92	5.22	4.83	4.87		6.24	5.06
11/8/2018	5	5.29	4.83				
11/9/2018				4.92		6.27	4.92
2/11/2019	4.7	5				6.08	
2/12/2019			4.65	4.79			4.86
4/17/2019	4.9	5.13	4.71			6.14	4.79
4/18/2019				4.9			
2/21/2020	4.86		4.55	4.8			4.73
2/22/2020		5.3				6.13	
4/14/2020	5.23	5.45	4.7	4.94		6.26	4.87

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-3	BAW-7	BAW-2 (bg)	BAW-5	BAW-2A (bg)
3/23/2016	<5	2.3 (J)	<5	<5	<5	4.5 (J)	
5/17/2016	<5	2.3 (J)		<5		17	
5/18/2016			<5		<5		
7/12/2016	<5			<5			
7/13/2016		2.4 (J)	1.5 (J)		<5	15	
9/13/2016	<5			<5		3.4 (J)	
9/14/2016		2.4 (J)	1.6 (J)		<5		
11/19/2016	<5	3.3 (J)	1.8 (J)	1.5 (J)	<5	3.5 (J)	
1/17/2017	<5		<5	<5	<5		
1/18/2017		2.3 (J)				3.2 (J)	
3/22/2017	<5			1.9 (J)			
3/23/2017		3.2 (J)	2.3 (J)		1.8 (J)	3.7 (J)	
5/24/2017	<5	2.4 (J)	1.6 (J)	<5	1.5 (J)	8.8	
10/16/2017	<5	2 (J)	<5	<5	<5	4 (J)	
3/28/2018	<5	2.4 (J)	1.6 (J)			3.3 (J)	1.7 (J)
3/29/2018				<5			
6/2/2018	1.9 (J)	3.7 (J)	2.9 (J)	2.8 (J)		4.3 (J)	3 (J)
11/8/2018	<5	2.7 (J)	1.6 (J)				
11/9/2018				<5		2.3 (J)	<5
2/11/2019	0.774 (J)	2.5				2.64	
2/12/2019			1.97	1.35			1.97
4/17/2019	1.43	3.15	2.5			3.27	2.82
4/18/2019				1.82			
9/27/2019	1.03			1.22			2.19
9/30/2019		2.34	1.64			2.82	
4/14/2020	0.928 (J)	2.99	1.62	1.18		4.2	2.71

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/20/2021 4:40 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-3	BAW-7	BAW-2 (bg)	BAW-5	BAW-2A (bg)
3/23/2016	20	46	30	22	30	88	
5/17/2016	24	52		30		110	
5/18/2016			20		20		
7/12/2016	24			26			
7/13/2016		36	40		40	120	
9/13/2016	18			28		92	
9/14/2016		38	<10		10		
11/19/2016	20	50	22	38	28	94	
1/17/2017	<10		14	10	14		
1/18/2017		18				68	
3/22/2017	12			22			
3/23/2017		32	28		16	80	
5/24/2017	16 (D)	32	18	22	12	90	
10/16/2017	58	64	36	34	50	110	
3/28/2018	18	56	36			86	30
3/29/2018				50			
6/2/2018	6	22	6	<10		72	26
11/8/2018	12	170	34				
11/9/2018				20		38	94
2/11/2019	<10	23				60	
2/12/2019			12	<10			22
4/17/2019	16	37	27			82	22
4/18/2019				39			
9/27/2019	26			<10			25
9/30/2019		<10	<10			55	
4/14/2020	25	30	31	24		77	38

FIGURE E.

Appendix III Interwell Prediction Limits (October 2020) - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**10/30/2020**	**0.194**	**Yes**	**36**	**n/a**	**n/a**	**88.89**	**n/a**	**n/a**	**0.001402**	**NP Inter (NDs) 1 of 2**
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**10/30/2020**	**3.84**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**10/30/2020**	**16.4**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Chloride (mg/L)	**BAW-3**	**8.032**	**n/a**	**10/30/2020**	**9.58**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	**BAW-5**	**8.032**	**n/a**	**10/30/2020**	**8.93**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
pH (SU)	**BAW-5**	**5.447**	**4.517**	**10/30/2020**	**6.19**	**Yes**	**34**	**4.982**	**0.2505**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**BAW-5**	**58.93**	**n/a**	**10/30/2020**	**88**	**Yes**	**34**	**4.805**	**1.547**	**5.882**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**

Appendix III Interwell Prediction Limits (October 2020) - All Results

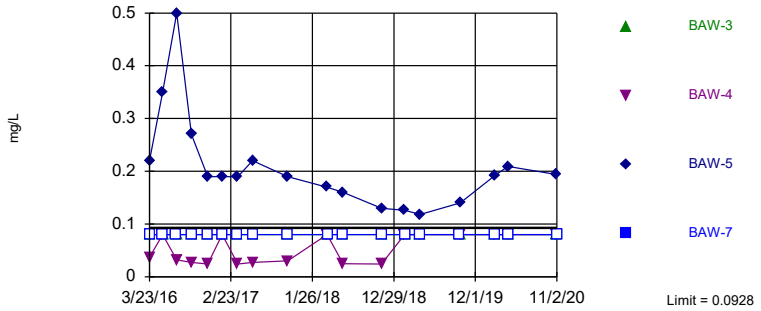
Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BAW-3	0.0928	n/a	10/30/2020	0.08ND	No	36	n/a	n/a	88.89	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Boron (mg/L)	BAW-4	0.0928	n/a	10/30/2020	0.08ND	No	36	n/a	n/a	88.89	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Boron (mg/L)	**BAW-5**	**0.0928**	**n/a**	**10/30/2020**	**0.194**	**Yes**	**36**	**n/a**	**n/a**	**88.89**	**n/a**	**n/a**	**0.001402**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	BAW-7	0.0928	n/a	11/2/2020	0.08ND	No	36	n/a	n/a	88.89	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BAW-3	2.8	n/a	10/30/2020	1	No	35	n/a	n/a	2.857	n/a	n/a	0.001468	NP Inter (normality) 1 of 2
Calcium (mg/L)	**BAW-4**	**2.8**	**n/a**	**10/30/2020**	**3.84**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**BAW-5**	**2.8**	**n/a**	**10/30/2020**	**16.4**	**Yes**	**35**	**n/a**	**n/a**	**2.857**	**n/a**	**n/a**	**0.001468**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	BAW-7	2.8	n/a	11/2/2020	0.535	No	35	n/a	n/a	2.857	n/a	n/a	0.001468	NP Inter (normality) 1 of 2
Chloride (mg/L)	**BAW-3**	**8.032**	**n/a**	**10/30/2020**	**9.58**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-4	8.032	n/a	10/30/2020	6.49	No	34	2.406	0.2305	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Chloride (mg/L)	**BAW-5**	**8.032**	**n/a**	**10/30/2020**	**8.93**	**Yes**	**34**	**2.406**	**0.2305**	**0**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Chloride (mg/L)	BAW-7	8.032	n/a	11/2/2020	4.91	No	34	2.406	0.2305	0	None	sqrt(x)	0.00188	Param Inter 1 of 2
Fluoride (mg/L)	BAW-3	0.1	n/a	10/30/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-4	0.1	n/a	10/30/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-5	0.1	n/a	10/30/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BAW-7	0.1	n/a	11/2/2020	0.1ND	No	36	n/a	n/a	91.67	n/a	n/a	0.001402	NP Inter (NDs) 1 of 2
pH (SU)	BAW-3	5.447	4.517	10/30/2020	4.8	No	34	4.982	0.2505	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	BAW-4	5.447	4.517	10/30/2020	5.32	No	34	4.982	0.2505	0	None	No	0.0009398	Param Inter 1 of 2
pH (SU)	**BAW-5**	**5.447**	**4.517**	**10/30/2020**	**6.19**	**Yes**	**34**	**4.982**	**0.2505**	**0**	**None**	**No**	**0.0009398**	**Param Inter 1 of 2**
pH (SU)	BAW-7	5.447	4.517	11/2/2020	4.92	No	34	4.982	0.2505	0	None	No	0.0009398	Param Inter 1 of 2
Sulfate (mg/L)	BAW-3	5	n/a	10/30/2020	1.44	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-4	5	n/a	10/30/2020	2.84	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-5	5	n/a	10/30/2020	4.76	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	BAW-7	5	n/a	11/2/2020	1.08	No	34	n/a	n/a	55.88	n/a	n/a	0.001565	NP Inter (NDs) 1 of 2
Total Dissolved Solids (mg/L)	BAW-3	58.93	n/a	10/30/2020	40	No	34	4.805	1.547	5.882	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	BAW-4	58.93	n/a	10/30/2020	40	No	34	4.805	1.547	5.882	None	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**BAW-5**	**58.93**	**n/a**	**10/30/2020**	**88**	**Yes**	**34**	**4.805**	**1.547**	**5.882**	**None**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	BAW-7	58.93	n/a	11/2/2020	28	No	34	4.805	1.547	5.882	None	sqrt(x)	0.00188	Param Inter 1 of 2

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.
Exceeds Limit: BAW-5

Prediction Limit

Interwell Non-parametric



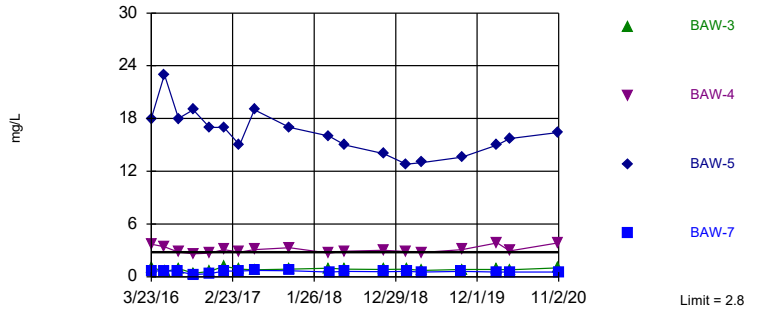
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 36 background values. 88.89% NDs. Annual per-constituent alpha = 0.01116. Individual comparison alpha = 0.001402 (1 of 2). Comparing 4 points to limit.

Constituent: Boron Analysis Run 1/20/2021 4:34 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Exceeds Limit: BAW-4, BAW-5

Prediction Limit

Interwell Non-parametric



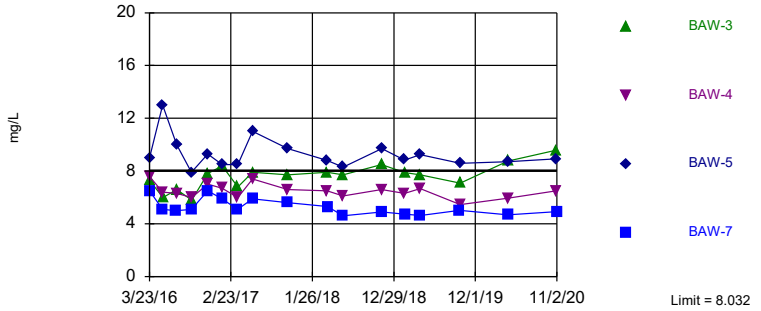
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 35 background values. 2.857% NDs. Annual per-constituent alpha = 0.01168. Individual comparison alpha = 0.001468 (1 of 2). Comparing 4 points to limit.

Constituent: Calcium Analysis Run 1/20/2021 4:34 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Exceeds Limit: BAW-3, BAW-5

Prediction Limit

Interwell Parametric



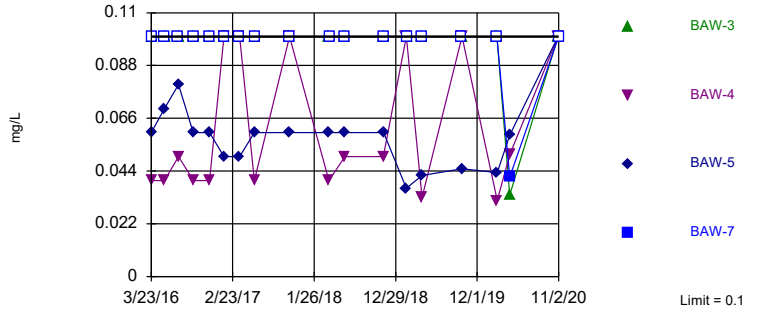
Background Data Summary (based on square root transformation): Mean=2.406, Std. Dev.=0.2305, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9162, critical = 0.908. Kappa = 1.856 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Chloride Analysis Run 1/20/2021 4:34 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.
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 36 background values. 91.67% NDs. Annual per-constituent alpha = 0.01116. Individual comparison alpha = 0.001402 (1 of 2). Comparing 4 points to limit.

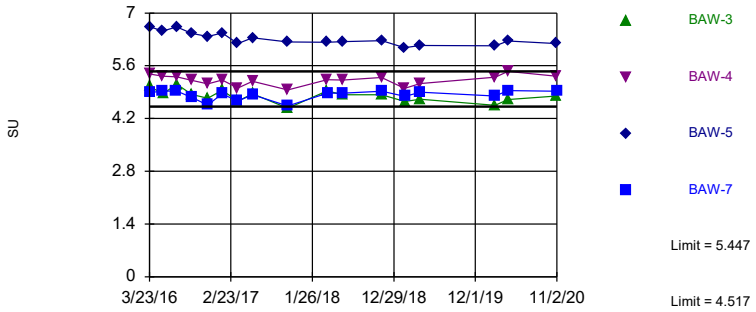
Constituent: Fluoride Analysis Run 1/20/2021 4:34 PM View: Interwell
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Exceeds Limits: BAW-5

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=4.982, Std. Dev.=0.2505, n=34. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9272, critical = 0.908. Kappa = 1.856 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009398. Comparing 4 points to limit.

Constituent: pH Analysis Run 1/20/2021 4:34 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

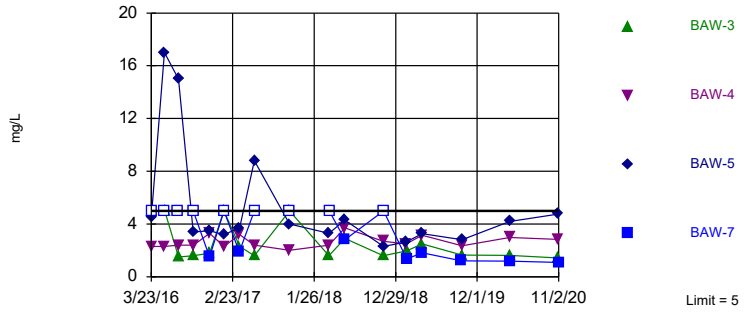
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

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 34 background values. 55.88% NDs. Annual per-constituent alpha = 0.01245. Individual comparison alpha = 0.001565 (1 of 2). Comparing 4 points to limit.

Constituent: Sulfate Analysis Run 1/20/2021 4:34 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

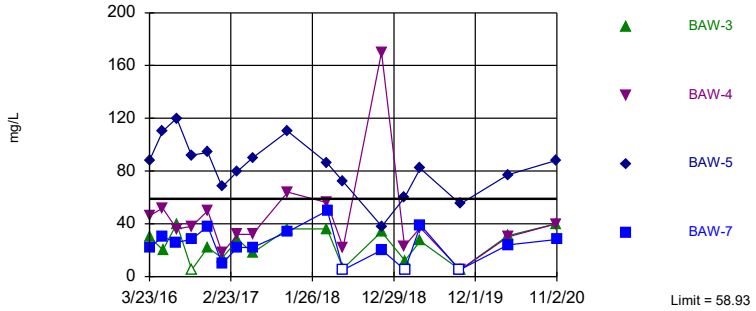
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Exceeds Limit: BAW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=4.805, Std. Dev.=1.547, n=34, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9461, critical = 0.908. Kappa = 1.856 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 4 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:34 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-3	BAW-7	BAW-2 (bg)	BAW-5	BAW-2A (bg)
3/23/2016	<0.08	0.037 (J)	<0.08	<0.08	<0.08	0.22	
5/17/2016	<0.08	<0.08		<0.08		0.35	
5/18/2016			<0.08		<0.08		
7/12/2016	<0.08			<0.08			
7/13/2016		0.032 (J)	<0.08		<0.08	0.5	
9/13/2016	<0.08			<0.08		0.27	
9/14/2016		0.027 (J)	<0.08		<0.08		
11/19/2016	<0.08	0.024 (J)	<0.08	<0.08	<0.08	0.19	
1/17/2017	<0.08		<0.08	<0.08	<0.08		
1/18/2017		<0.08				0.19	
3/22/2017	<0.08			<0.08			
3/23/2017		0.024 (J)	<0.08		<0.08	0.19	
5/24/2017	<0.08	0.027 (J)	<0.08	<0.08	<0.08	0.22	
10/16/2017	<0.08	0.03 (J)	<0.08	<0.08	<0.08	0.19	
3/28/2018	<0.08	<0.08	<0.08			0.17	<0.08
3/29/2018				<0.08			
6/2/2018	<0.08	0.025 (J)	<0.08	<0.08		0.16	<0.08
11/8/2018	<0.08	0.024 (J)	<0.08				
11/9/2018				<0.08		0.13	<0.08
2/11/2019	<0.08	<0.08				0.126	
2/12/2019			<0.08	<0.08			<0.08
4/17/2019	<0.08	<0.08	<0.08			0.118	<0.08
4/18/2019				<0.08			
9/27/2019	<0.08			<0.08			<0.08
9/30/2019		<0.08	<0.08			0.14	
2/21/2020	0.0928		<0.08	<0.08			0.0589 (J)
2/22/2020		<0.08				0.193	
4/14/2020	<0.08	<0.08	<0.08	<0.08		0.209	0.0424 (J)
10/30/2020	<0.08	<0.08	<0.08			0.194	0.0495 (J)
11/2/2020				<0.08			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-7	BAW-5	BAW-3	BAW-4	BAW-2 (bg)	BAW-2A (bg)
3/23/2016	<0.25	0.65	18	1.1	3.7	2.6 (o)	
5/17/2016	0.84	0.68	23		3.4		
5/18/2016				0.56		1.3	
7/12/2016	0.79	0.62					
7/13/2016			18	0.95	2.8	1.1	
9/13/2016	0.42	0.25	19				
9/14/2016				0.4	2.6	1.1	
11/19/2016	1.2	0.36	17	0.62	2.7	1	
1/17/2017	1.4	0.66		1.2		0.87	
1/18/2017			17		3.1		
3/22/2017	0.95	0.65					
3/23/2017			15	0.87	2.8	0.74	
5/24/2017	1.3	0.72	19	0.81	3.1	0.84	
10/16/2017	0.93	0.7	17	0.86	3.3	0.76	
3/28/2018	1		16	0.97	2.7		2.8
3/29/2018		0.55					
6/2/2018	0.93	0.6	15	0.86	2.9		0.71
11/8/2018	1			0.84	3		
11/9/2018		0.59	14				0.61
2/11/2019	1		12.8		2.88		
2/12/2019		0.608		0.856			0.757
4/17/2019	0.893		13	0.711	2.77		0.755
4/18/2019		0.55					
9/27/2019	0.8	0.598					0.663
9/30/2019			13.6	0.826	3.08		
2/21/2020	1.02	0.552		0.841			0.648
2/22/2020			15		3.86		
4/14/2020	0.887	0.532	15.7	0.811	2.95		0.67
10/30/2020	0.945		16.4	1	3.84		0.672
11/2/2020		0.535					

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-5	BAW-2 (bg)	BAW-3	BAW-7	BAW-2A (bg)
3/23/2016	6.5	7.6	9	5.1	7.3	6.5	
5/17/2016	4.9	6.4	13			5.1	
5/18/2016				4.2	6		
7/12/2016	5.3					5	
7/13/2016		6.3	10	4.7	6.6		
9/13/2016	4.8 (F1)		7.9			5.1	
9/14/2016		6		4.5	5.8		
11/19/2016	7.1	7	9.3	6.1	7.8	6.5	
1/17/2017	5.8			5.4	8.4	5.9	
1/18/2017		6.7	8.5				
3/22/2017	4.9					5.1	
3/23/2017		6	8.5	5.1	6.8		
5/24/2017	5.9	7.4	11	5.5	7.9	5.9	
10/16/2017	5.7	6.6	9.7	6.1	7.7	5.6	
3/28/2018	5.7	6.5	8.8		7.9		6.7
3/29/2018						5.3	
6/2/2018	4.7	6.1	8.3		7.7	4.6	5.8
11/8/2018	5.6	6.6			8.5		
11/9/2018			9.7			4.9	7.2
2/11/2019	4.84	6.31	8.84				
2/12/2019					7.89	4.72	8.4
4/17/2019	4.99	6.68	9.24		7.71		8.03
4/18/2019						4.64	
9/27/2019	5.08					5.02	8.37
9/30/2019		5.45	8.59		7.07		
4/14/2020	4.91	5.93	8.71		8.75	4.68	7.57
10/30/2020	5.55	6.49	8.93		9.58		7.59
11/2/2020						4.91	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-3	BAW-7	BAW-2 (bg)	BAW-5	BAW-2A (bg)
3/23/2016	<0.1	0.04 (J)	<0.1	<0.1	<0.1	0.06 (J)	
5/17/2016	<0.1	0.04 (J)		<0.1		0.07 (J)	
5/18/2016			<0.1		<0.1		
7/12/2016	<0.1			<0.1			
7/13/2016		0.05 (J)	<0.1		<0.1	0.08 (J)	
9/13/2016	<0.1			<0.1		0.06 (J)	
9/14/2016		0.04 (J)	<0.1		<0.1		
11/19/2016	<0.1	0.04 (J)	<0.1	<0.1	<0.1	0.06 (J)	
1/17/2017	<0.1		<0.1	<0.1	<0.1		
1/18/2017		<0.1				0.05 (J)	
3/22/2017	<0.1			<0.1			
3/23/2017		<0.1	<0.1		<0.1	0.05 (J)	
5/24/2017	<0.1	0.04 (J)	<0.1	<0.1 (D)	<0.1	0.06 (J)	
10/16/2017	<0.1	<0.1	<0.1	<0.1	<0.1	0.06 (J)	
3/28/2018	<0.1	0.04 (J)	<0.1			0.06 (J)	<0.1
3/29/2018				<0.1			
6/2/2018	<0.1	0.05 (J)	<0.1	<0.1		0.06 (J)	<0.1
11/8/2018	<0.1	0.05 (J)	<0.1				
11/9/2018				<0.1		0.06 (J)	<0.1
2/11/2019	<0.1	<0.1				0.0368 (J)	
2/12/2019			<0.1	<0.1			<0.1
4/17/2019	<0.1	0.033 (J)	<0.1			0.0421 (J)	<0.1
4/18/2019				<0.1			
9/27/2019	<0.1			<0.1			0.0313 (J)
9/30/2019		<0.1	<0.1			0.045 (J)	
2/21/2020	<0.1		<0.1	<0.1			<0.1
2/22/2020		0.0317 (J)				0.0434 (J)	
4/14/2020	0.0532 (J)	0.0508 (J)	0.034 (J)	0.0415 (J)		0.059 (J)	0.0537 (J)
10/30/2020	<0.1	<0.1	<0.1			<0.1	<0.1
11/2/2020				<0.1			

Prediction Limit

Constituent: pH (SU) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-5	BAW-2 (bg)	BAW-3	BAW-7	BAW-2A (bg)
3/23/2016	5.12	5.38	6.64	5.52	5.05	4.89	
5/17/2016	5.23	5.32	6.52			4.92	
5/18/2016				5.24	4.86		
7/12/2016	5.77					4.93	
7/13/2016		5.31	6.63	5.17	5.11		
9/13/2016	4.98		6.46			4.76	
9/14/2016		5.21		5.04	4.84		
11/19/2016	4.82	5.12	6.38	4.88	4.74	4.56	
1/17/2017	5.04			5.04	4.95	4.86	
1/18/2017		5.22	6.47				
3/22/2017	4.73					4.66	
3/23/2017		5.01	6.19	4.66	4.66		
5/24/2017	5.01	5.19	6.34	4.93	4.86	4.83	
10/16/2017	4.59	4.96	6.23	4.65	4.47	4.53	
3/28/2018	4.87	5.23	6.22		4.93		5.39
3/29/2018						4.87	
6/2/2018	4.92	5.22	6.24		4.83	4.87	5.06
11/8/2018	5	5.29			4.83		
11/9/2018			6.27			4.92	4.92
2/11/2019	4.7	5	6.08				
2/12/2019					4.65	4.79	4.86
4/17/2019	4.9	5.13	6.14		4.71		4.79
4/18/2019						4.9	
2/21/2020	4.86				4.55	4.8	4.73
2/22/2020		5.3	6.13				
4/14/2020	5.23	5.45	6.26		4.7	4.94	4.87
10/30/2020	5	5.32	6.19		4.8		4.87
11/2/2020						4.92	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-5	BAW-2 (bg)	BAW-3	BAW-7	BAW-2A (bg)
3/23/2016	<5	2.3 (J)	4.5 (J)	<5	<5	<5	
5/17/2016	<5	2.3 (J)	17			<5	
5/18/2016				<5	<5		
7/12/2016	<5					<5	
7/13/2016		2.4 (J)	15	<5	1.5 (J)		
9/13/2016	<5		3.4 (J)			<5	
9/14/2016		2.4 (J)		<5	1.6 (J)		
11/19/2016	<5	3.3 (J)	3.5 (J)	<5	1.8 (J)	1.5 (J)	
1/17/2017	<5			<5	<5	<5	
1/18/2017		2.3 (J)	3.2 (J)				
3/22/2017	<5					1.9 (J)	
3/23/2017		3.2 (J)	3.7 (J)	1.8 (J)	2.3 (J)		
5/24/2017	<5	2.4 (J)	8.8	1.5 (J)	1.6 (J)	<5	
10/16/2017	<5	2 (J)	4 (J)	<5	<5	<5	
3/28/2018	<5	2.4 (J)	3.3 (J)		1.6 (J)		1.7 (J)
3/29/2018						<5	
6/2/2018	1.9 (J)	3.7 (J)	4.3 (J)		2.9 (J)	2.8 (J)	3 (J)
11/8/2018	<5	2.7 (J)			1.6 (J)		
11/9/2018			2.3 (J)			<5	<5
2/11/2019	0.774 (J)	2.5	2.64				
2/12/2019					1.97	1.35	1.97
4/17/2019	1.43	3.15	3.27		2.5		2.82
4/18/2019						1.82	
9/27/2019	1.03					1.22	2.19
9/30/2019		2.34	2.82		1.64		
4/14/2020	0.928 (J)	2.99	4.2		1.62	1.18	2.71
10/30/2020	0.91 (J)	2.84	4.76		1.44		3.97
11/2/2020						1.08	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/20/2021 4:35 PM View: Interwell

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-1 (bg)	BAW-4	BAW-5	BAW-2 (bg)	BAW-3	BAW-7	BAW-2A (bg)
3/23/2016	20	46	88	30	30	22	
5/17/2016	24	52	110			30	
5/18/2016				20	20		
7/12/2016	24					26	
7/13/2016		36	120	40	40		
9/13/2016	18		92			28	
9/14/2016		38		10	<10		
11/19/2016	20	50	94	28	22	38	
1/17/2017	<10			14	14	10	
1/18/2017		18	68				
3/22/2017	12					22	
3/23/2017		32	80	16	28		
5/24/2017	16 (D)	32	90	12	18	22	
10/16/2017	58	64	110	50	36	34	
3/28/2018	18	56	86		36		30
3/29/2018						50	
6/2/2018	6	22	72		6	<10	26
11/8/2018	12	170			34		
11/9/2018			38			20	94
2/11/2019	<10	23	60				
2/12/2019					12	<10	22
4/17/2019	16	37	82		27		22
4/18/2019						39	
9/27/2019	26					<10	25
9/30/2019		<10	55		<10		
4/14/2020	25	30	77		31	24	38
10/30/2020	34	40	88		40		48
11/2/2020						28	

FIGURE F.

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:42 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	**BAW-2 (bg)**	**-0.4143**	**-23**	**-21**	**Yes**	**8**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**BAW-5**	**-1.213**	**-79**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**BAW-2 (bg)**	**-0.5393**	**-29**	**-25**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	**BAW-5**	**-0.1029**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

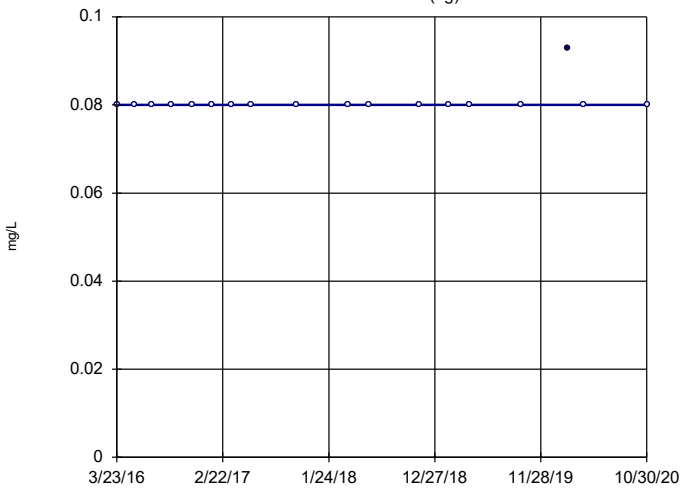
Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:42 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BAW-1 (bg)	0	13	68	No	18	94.44	n/a	n/a	0.01	NP
Boron (mg/L)	BAW-2 (bg)	0	0	25	No	9	100	n/a	n/a	0.01	NP
Boron (mg/L)	BAW-2A (bg)	0	-7	-25	No	9	66.67	n/a	n/a	0.01	NP
Boron (mg/L)	BAW-5	-0.02755	-62	-68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BAW-1 (bg)	0.01816	17	68	No	18	5.556	n/a	n/a	0.01	NP
Calcium (mg/L)	**BAW-2 (bg)**	**-0.4143**	**-23**	**-21**	**Yes**	**8**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	BAW-2A (bg)	-0.03661	-10	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BAW-4	0.04897	18	68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	**BAW-5**	**-1.213**	**-79**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	BAW-1 (bg)	-0.09982	-26	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-2 (bg)	1.001	18	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-2A (bg)	0.5831	10	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-3	0.4303	60	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BAW-5	-0.1227	-20	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	BAW-1 (bg)	-0.04636	-28	-63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	**BAW-2 (bg)**	**-0.5393**	**-29**	**-25**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH (SU)	BAW-2A (bg)	-0.1697	-15	-21	No	8	0	n/a	n/a	0.01	NP
pH (SU)	**BAW-5**	**-0.1029**	**-85**	**-63**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Total Dissolved Solids (mg/L)	BAW-1 (bg)	0	2	63	No	17	11.76	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-2 (bg)	-5.236	-4	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-2A (bg)	4.364	3	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BAW-5	-7.365	-54	-63	No	17	0	n/a	n/a	0.01	NP

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BAW-1 (bg)



n = 18

Slope = 0
units per year.

Mann-Kendall
statistic = 13
critical = 68

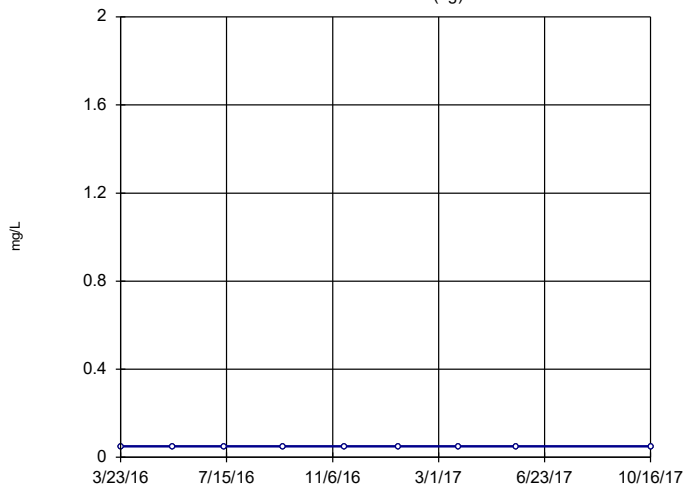
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 1/20/2021 4:41 PM View: Trend Tests
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BAW-2 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 25

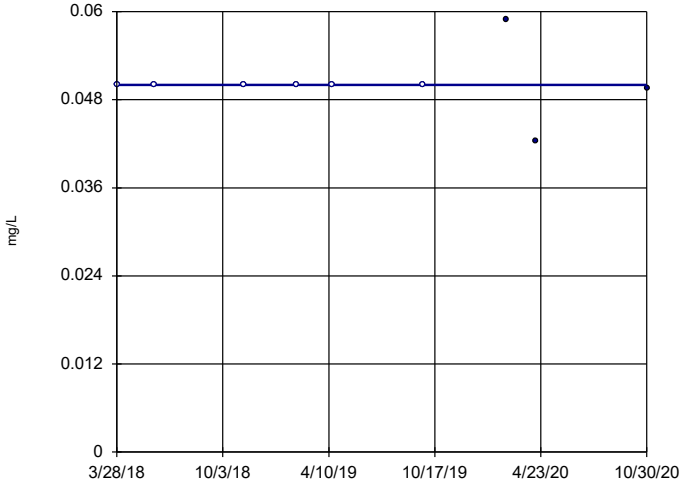
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 1/20/2021 4:41 PM View: Trend Tests
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BAW-2A (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -7
critical = -25

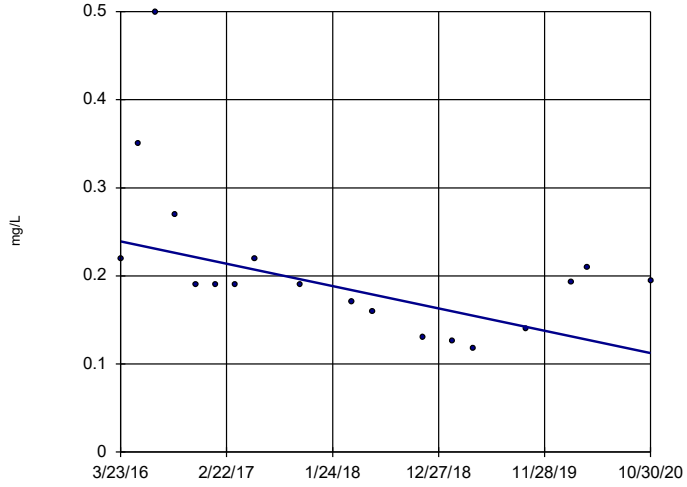
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Boron Analysis Run 1/20/2021 4:41 PM View: Trend Tests
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-5



n = 18

Slope = -0.02755
units per year.

Mann-Kendall
statistic = -62
critical = -68

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

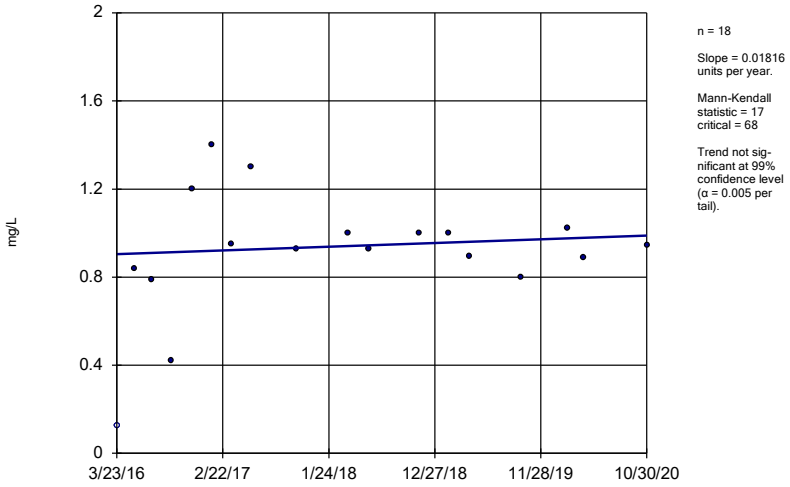
Constituent: Boron Analysis Run 1/20/2021 4:41 PM View: Trend Tests
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BAW-1 (bg)



n = 18

Slope = 0.01816 units per year.

Mann-Kendall statistic = 17 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

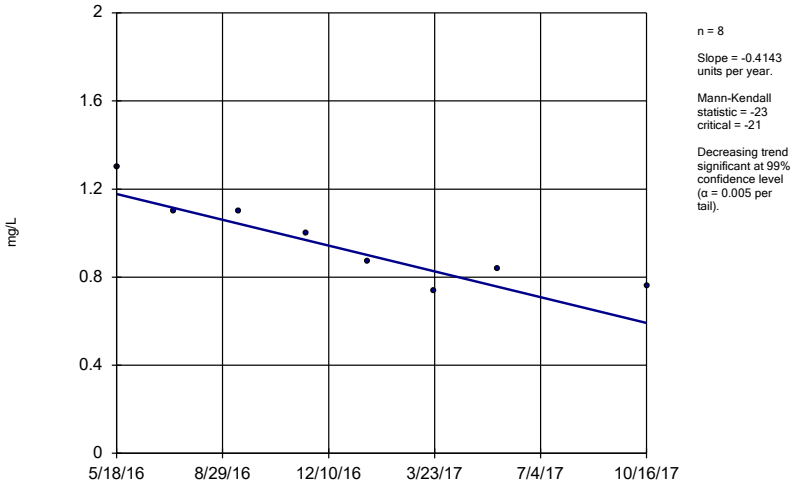
Constituent: Calcium Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-2 (bg)



n = 8

Slope = -0.4143 units per year.

Mann-Kendall statistic = -23 critical = -21

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

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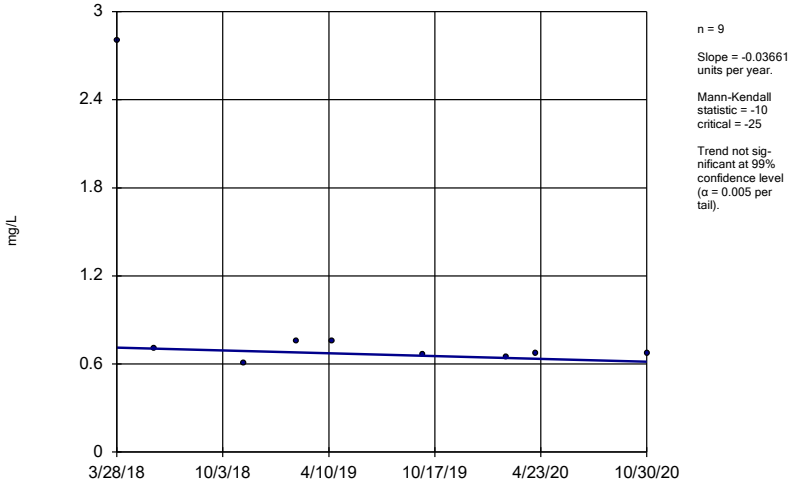
Sen's Slope Estimator

BAW-2A (bg)



n = 9

Slope = -0.03661 units per year.

Mann-Kendall statistic = -10 critical = -25

Trend not significant at 99% confidence level (α = 0.005 per tail).

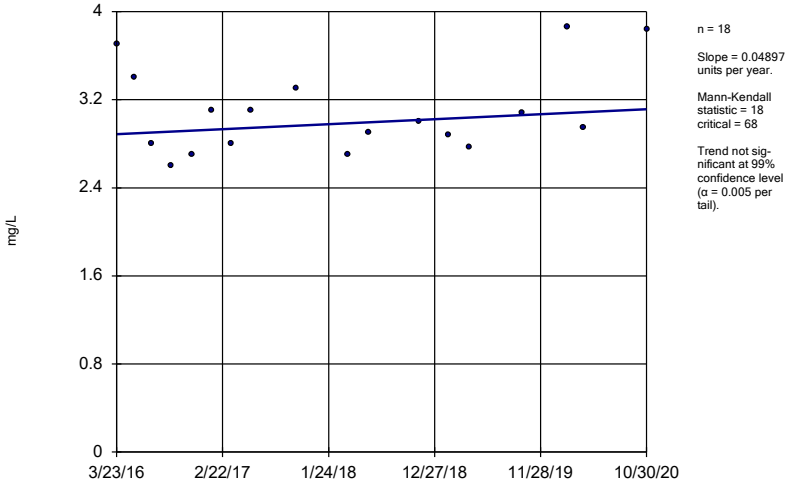
Constituent: Calcium Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-4



n = 18

Slope = 0.04897 units per year.

Mann-Kendall statistic = 18 critical = 68

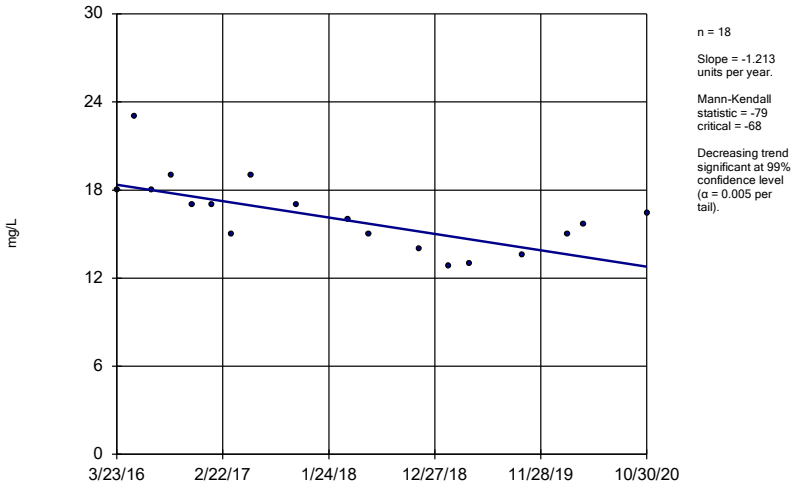
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator

BAW-5



n = 18

Slope = -1.213 units per year.

Mann-Kendall statistic = -79 critical = -68

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

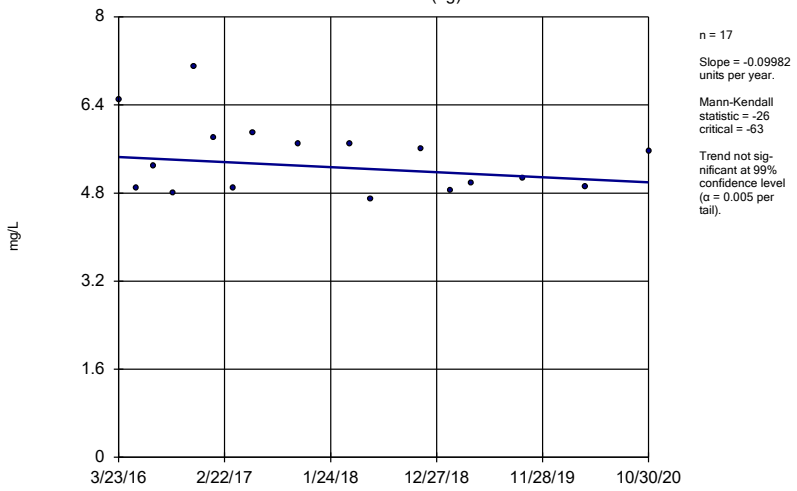
Constituent: Calcium Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-1 (bg)



n = 17

Slope = -0.09982 units per year.

Mann-Kendall statistic = -26 critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

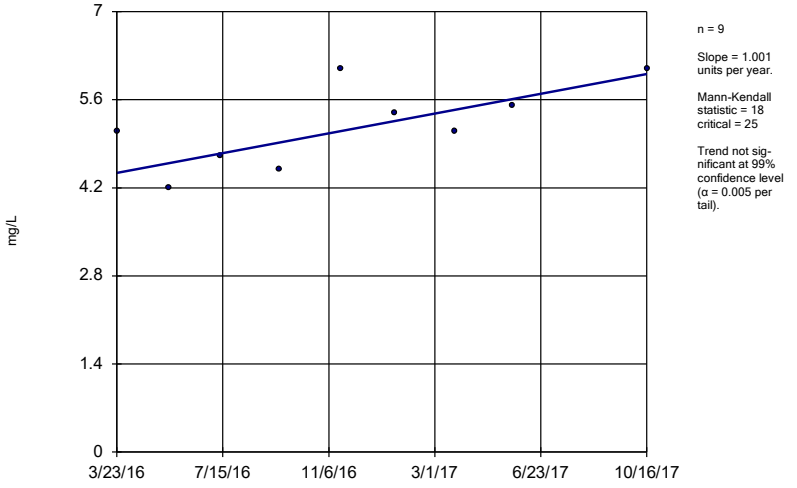
Constituent: Chloride Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-2 (bg)



n = 9

Slope = 1.001 units per year.

Mann-Kendall statistic = 18 critical = 25

Trend not significant at 99% confidence level (α = 0.005 per tail).

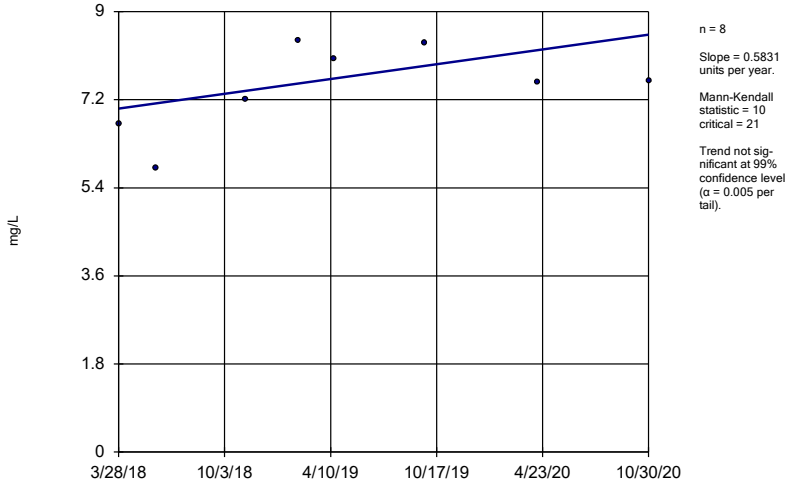
Constituent: Chloride Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-2A (bg)



n = 8

Slope = 0.5831 units per year.

Mann-Kendall statistic = 10 critical = 21

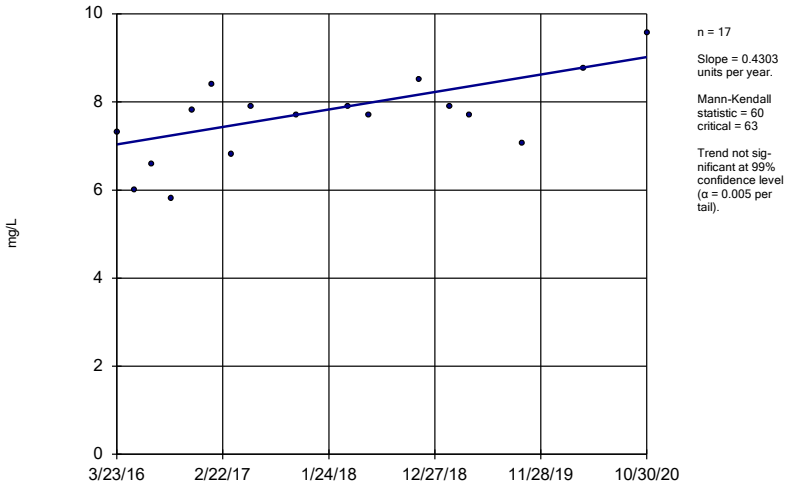
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator

BAW-3



n = 17

Slope = 0.4303 units per year.

Mann-Kendall statistic = 60 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

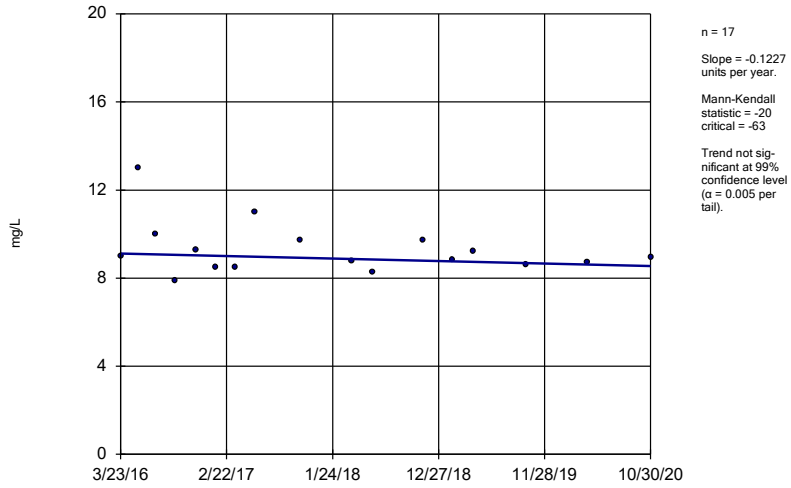
Constituent: Chloride Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-5



n = 17

Slope = -0.1227 units per year.

Mann-Kendall statistic = -20 critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

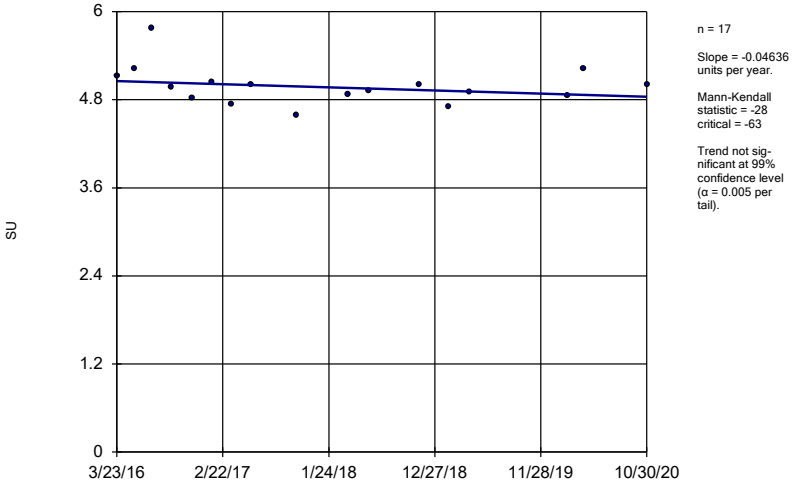
Constituent: Chloride Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-1 (bg)



n = 17

Slope = -0.04636 units per year.

Mann-Kendall statistic = -28 critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

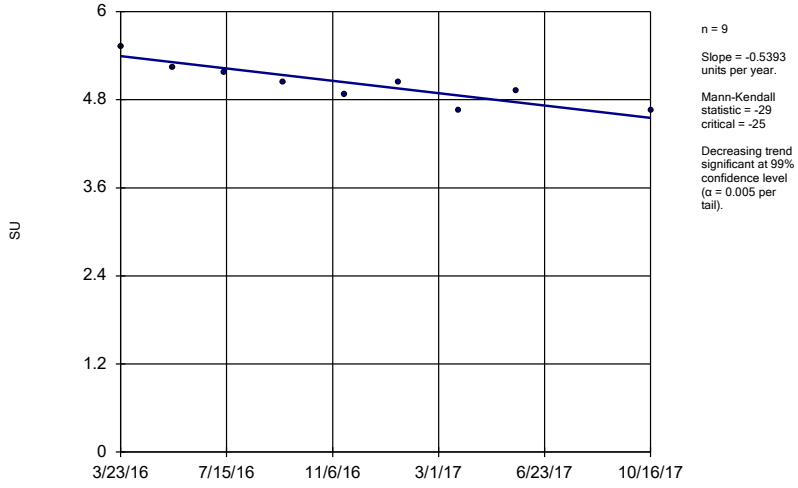
Constituent: pH Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-2 (bg)



n = 9

Slope = -0.5393 units per year.

Mann-Kendall statistic = -29 critical = -25

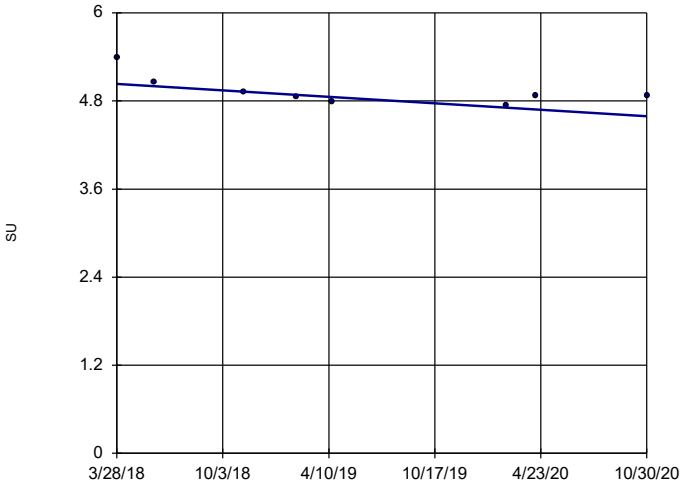
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator

BAW-2A (bg)



n = 8

Slope = -0.1697 units per year.

Mann-Kendall statistic = -15 critical = -21

Trend not significant at 99% confidence level (α = 0.005 per tail).

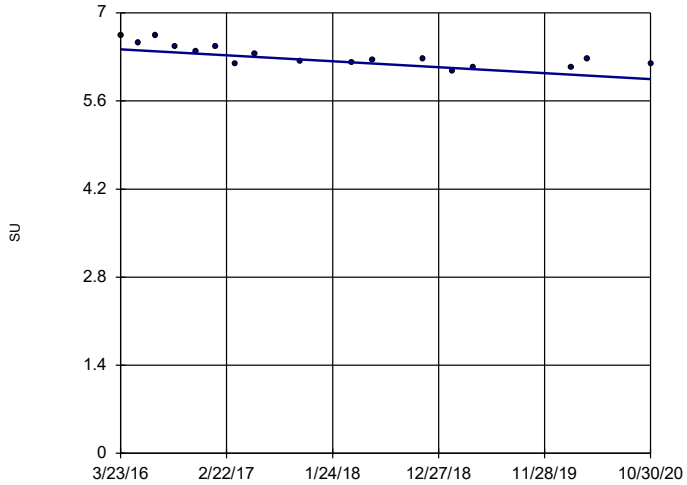
Constituent: pH Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-5



n = 17

Slope = -0.1029 units per year.

Mann-Kendall statistic = -85 critical = -63

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 1/20/2021 4:41 PM View: Trend Tests

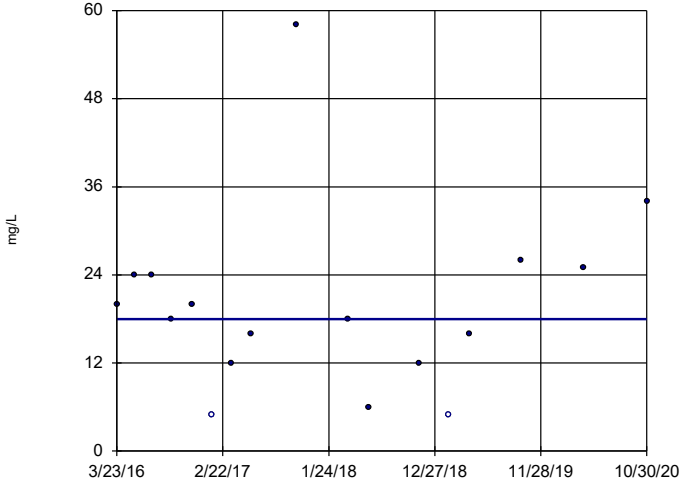
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BAW-1 (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 2 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

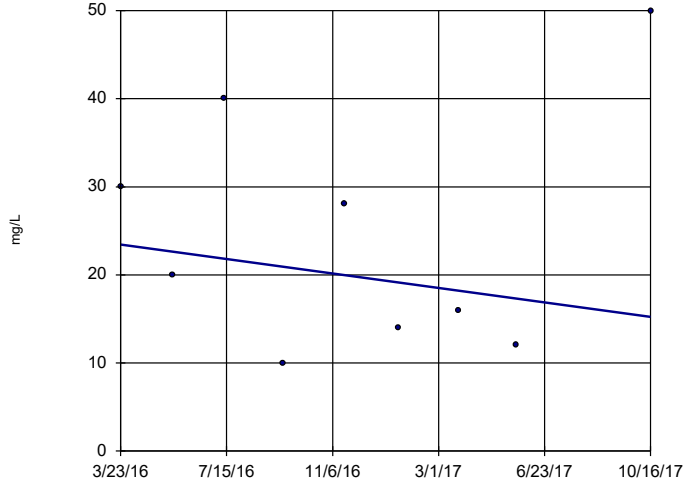
Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-2 (bg)



n = 9

Slope = -5.236 units per year.

Mann-Kendall statistic = -4 critical = -25

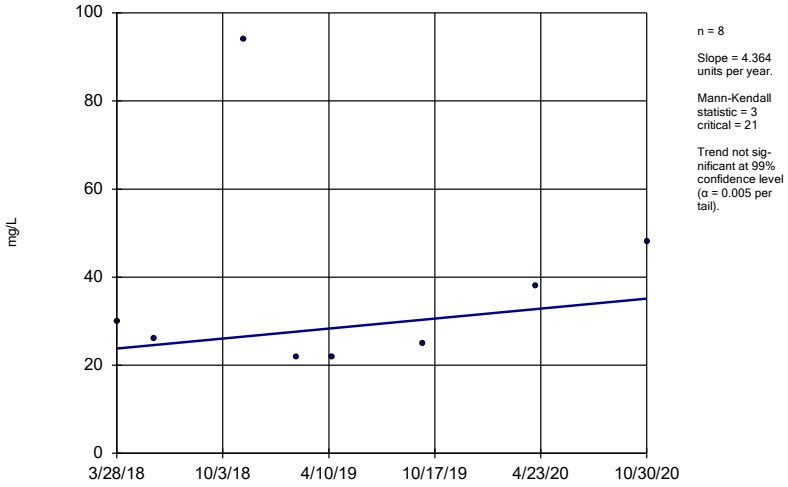
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sen's Slope Estimator

BAW-2A (bg)



n = 8

Slope = 4.364 units per year.

Mann-Kendall statistic = 3
critical = 21

Trend not significant at 99% confidence level (α = 0.005 per tail).

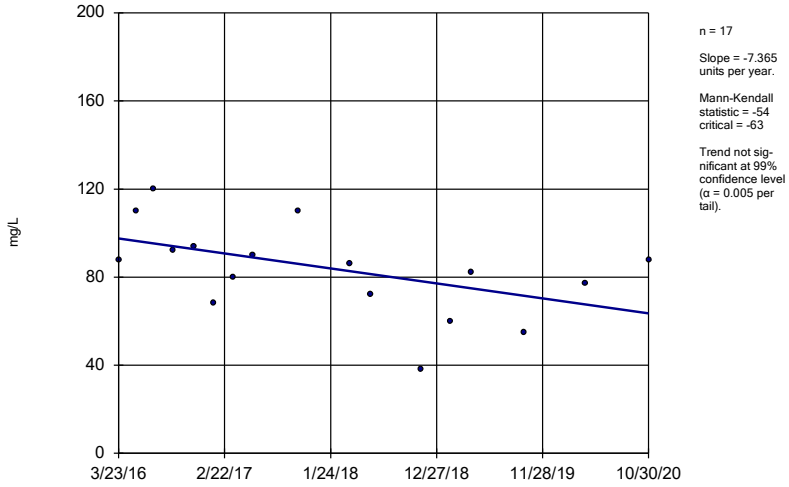
Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sen's Slope Estimator

BAW-5



n = 17

Slope = -7.365 units per year.

Mann-Kendall statistic = -54
critical = -63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/20/2021 4:41 PM View: Trend Tests

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

FIGURE G.

Upper Tolerance Limit Summary Table

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:45 PM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.002	n/a	n/a	28	n/a	n/a	96.43	n/a	n/a	0.2378	NP Inter(NDs)
Arsenic (mg/L)	0.001	n/a	n/a	34	n/a	n/a	100	n/a	n/a	0.1748	NP Inter(NDs)
Barium (mg/L)	0.0411	n/a	n/a	34	0.001021	0.000307	0	None	x^2	0.05	Inter
Beryllium (mg/L)	0.0025	n/a	n/a	30	n/a	n/a	96.67	n/a	n/a	0.2146	NP Inter(NDs)
Cadmium (mg/L)	0.0025	n/a	n/a	34	n/a	n/a	97.06	n/a	n/a	0.1748	NP Inter(NDs)
Chromium (mg/L)	0.00286	n/a	n/a	32	n/a	n/a	87.5	n/a	n/a	0.1937	NP Inter(NDs)
Cobalt (mg/L)	0.001302	n/a	n/a	34	0.0008678	0.0001995	5.882	None	No	0.05	Inter
Combined Radium 226 + 228 (pCi/L)	2.5	n/a	n/a	34	n/a	n/a	5.882	n/a	n/a	0.1748	NP Inter(normality)
Fluoride (mg/L)	0.1	n/a	n/a	36	n/a	n/a	91.67	n/a	n/a	0.1578	NP Inter(NDs)
Lead (mg/L)	0.001	n/a	n/a	32	n/a	n/a	100	n/a	n/a	0.1937	NP Inter(NDs)
Lithium (mg/L)	0.00505	n/a	n/a	33	n/a	n/a	69.7	n/a	n/a	0.184	NP Inter(NDs)
Mercury (mg/L)	0.0002	n/a	n/a	26	n/a	n/a	92.31	n/a	n/a	0.2635	NP Inter(NDs)
Molybdenum (mg/L)	0.015	n/a	n/a	30	n/a	n/a	86.67	n/a	n/a	0.2146	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	30	n/a	n/a	80	n/a	n/a	0.2146	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	30	n/a	n/a	96.67	n/a	n/a	0.2146	NP Inter(NDs)

FIGURE H.

PLANT DANIEL BOTTOM ASH GWPS				
Constituent Name	**MCL**	**CCR-Rule Specified**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.002	0.006
Arsenic, Total (mg/L)	0.01		0.001	0.01
Barium, Total (mg/L)	2		0.041	2
Beryllium, Total (mg/L)	0.004		0.0025	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.0029	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.0013	0.006
Combined Radium, Total (pCi/L)	5		2.5	5
Fluoride, Total (mg/L)	4		0.1	4
Lead, Total (mg/L)	0.015		0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.0051	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.015	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE I.

Confidence Intervals - Significant Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	**BAW-5**	**0.1965**	**0.1736**	**0.04**	**Yes**	**17**	**0.1851**	**0.01823**	**0**	**None**	**No**	**0.01**	**Param.**

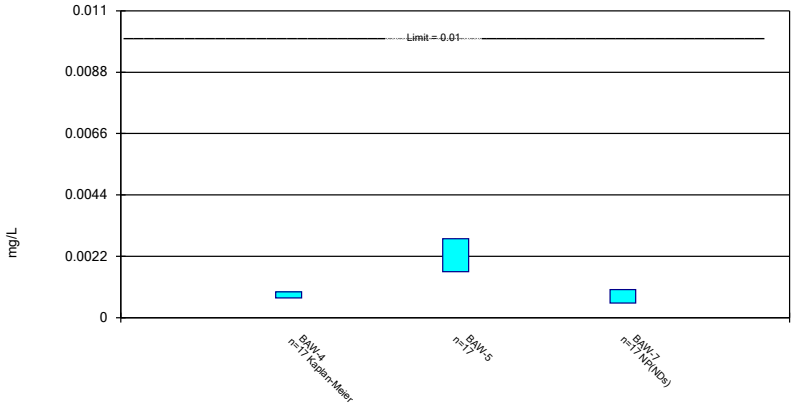
Confidence Intervals - All Results

Plant Daniel Client: Southern Company Data: Bottom Ash CCR Printed 1/20/2021, 4:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	BAW-4	0.0009291	0.0007009	0.01	No	17	0.0008585	0.0001831	23.53	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	BAW-5	0.002834	0.001642	0.01	No	17	0.002238	0.0009515	0	None	No	0.01	Param.
Arsenic (mg/L)	BAW-7	0.001	0.00052	0.01	No	17	0.0009424	0.0001628	88.24	None	No	0.01	NP (NDs)
Barium (mg/L)	BAW-3	0.02943	0.02055	2	No	17	0.02499	0.00709	0	None	No	0.01	Param.
Barium (mg/L)	BAW-4	0.01037	0.008872	2	No	17	0.009622	0.001197	0	None	No	0.01	Param.
Barium (mg/L)	BAW-5	0.04577	0.04076	2	No	17	0.04331	0.004082	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BAW-7	0.01232	0.01111	2	No	17	0.01172	0.0009632	0	None	No	0.01	Param.
Cadmium (mg/L)	BAW-3	0.001071	0.0006494	0.005	No	17	0.0009067	0.0004564	5.882	None	ln(x)	0.01	Param.
Cadmium (mg/L)	BAW-5	0.0025	0.000155	0.005	No	17	0.002362	0.0005687	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-3	0.003	0.00165	0.1	No	16	0.002041	0.0002703	87.5	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-4	0.002	0.0015	0.1	No	16	0.001881	0.0002689	81.25	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-5	0.0024	0.0012	0.1	No	16	0.002163	0.0007907	81.25	None	No	0.01	NP (NDs)
Chromium (mg/L)	BAW-7	0.00206	0.002	0.1	No	16	0.002004	0.000015	93.75	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BAW-3	0.006256	0.005404	0.006	No	17	0.00583	0.0006801	0	None	No	0.01	Param.
Cobalt (mg/L)	BAW-4	0.001192	0.0009562	0.006	No	17	0.001074	0.000188	0	None	No	0.01	Param.
Cobalt (mg/L)	BAW-5	0.0025	0.00042	0.006	No	17	0.002378	0.0005045	94.12	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BAW-7	0.0009234	0.0007346	0.006	No	17	0.000829	0.0001507	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BAW-3	0.646	0.0761	5	No	17	0.5758	0.7808	11.76	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BAW-4	0.3729	0.03871	5	No	17	0.6413	0.9036	17.65	Kaplan-Meier	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BAW-5	0.7011	0.3058	5	No	16	0.5833	0.5468	6.25	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BAW-7	0.4345	0.1335	5	No	17	0.7052	0.8768	17.65	Kaplan-Meier	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BAW-3	0.1	0.034	4	No	18	0.09633	0.01556	94.44	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BAW-4	0.1	0.04	4	No	18	0.06142	0.02857	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	BAW-5	0.06637	0.04969	4	No	18	0.05868	0.01461	5.556	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BAW-7	0.1	0.0415	4	No	18	0.09675	0.01379	94.44	None	No	0.01	NP (NDs)
Lead (mg/L)	BAW-3	0.001	0.00015	0.015	No	16	0.0006427	0.0003828	50	None	No	0.01	NP (normality)
Lead (mg/L)	BAW-4	0.001	0.00042	0.015	No	16	0.0008751	0.0002724	81.25	None	No	0.01	NP (NDs)
Lead (mg/L)	BAW-5	0.001	0.000152	0.015	No	16	0.000947	0.000212	93.75	None	No	0.01	NP (NDs)
Lead (mg/L)	BAW-7	0.001	0.000129	0.015	No	16	0.0009456	0.0002178	93.75	None	No	0.01	NP (NDs)
Lithium (mg/L)	BAW-3	0.00687	0.0024	0.04	No	17	0.004444	0.00138	70.59	None	No	0.01	NP (NDs)
Lithium (mg/L)	BAW-4	0.027	0.0224	0.04	No	17	0.02574	0.005177	0	None	No	0.01	NP (normality)
Lithium (mg/L)	**BAW-5**	**0.1965**	**0.1736**	**0.04**	**Yes**	**17**	**0.1851**	**0.01823**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	BAW-7	0.005	0.0029	0.04	No	17	0.004284	0.001044	64.71	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-3	0.000497	0.00013	0.002	No	13	0.0002085	0.00009382	76.92	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-4	0.0002	0.00013	0.002	No	13	0.0001848	0.00003878	84.62	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-5	0.0002	0.000074	0.002	No	13	0.0001903	0.00003495	92.31	None	No	0.01	NP (NDs)
Mercury (mg/L)	BAW-7	0.0002	0.000071	0.002	No	13	0.0001901	0.00003578	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BAW-4	0.015	0.000616	0.1	No	15	0.01404	0.003714	93.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BAW-5	0.015	0.001	0.1	No	15	0.007372	0.006685	40	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BAW-7	0.015	0.0038	0.1	No	15	0.01425	0.002892	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BAW-3	0.005	0.00033	0.05	No	15	0.002892	0.002338	53.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BAW-5	0.005	0.00033	0.05	No	15	0.004689	0.001206	93.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BAW-7	0.005	0.00031	0.05	No	15	0.003553	0.002162	66.67	None	No	0.01	NP (NDs)
Thallium (mg/L)	BAW-3	0.001	0.000158	0.002	No	15	0.0007743	0.0003896	73.33	None	No	0.01	NP (NDs)

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

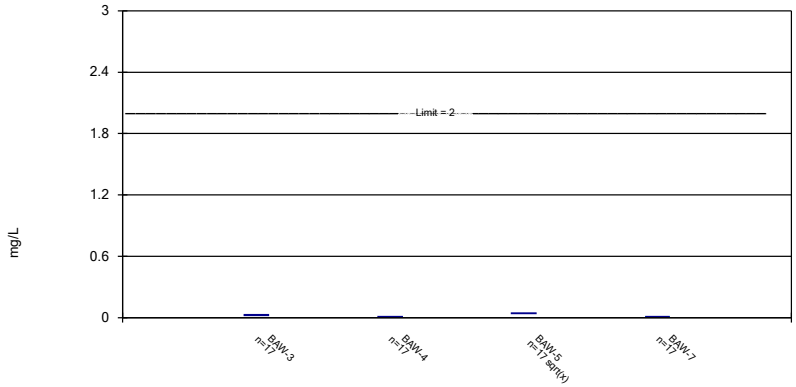


Constituent: Arsenic Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

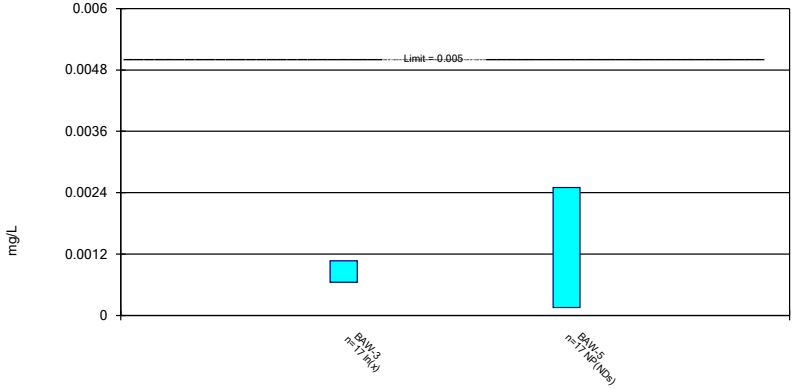


Constituent: Barium Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

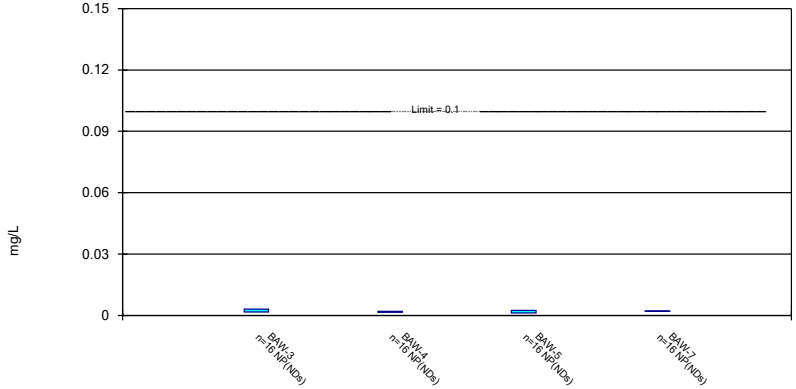


Constituent: Cadmium Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

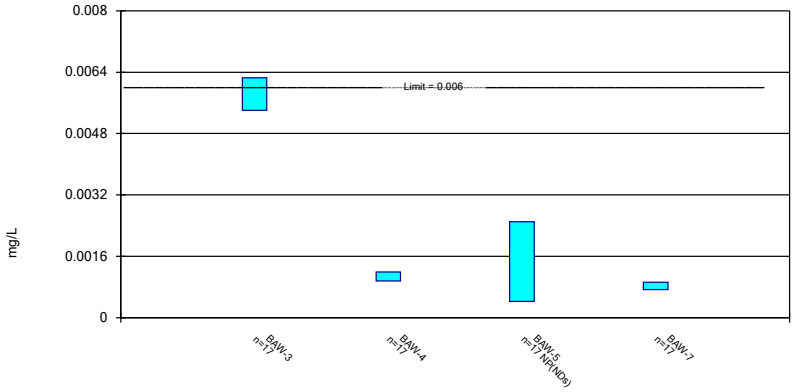


Constituent: Chromium Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

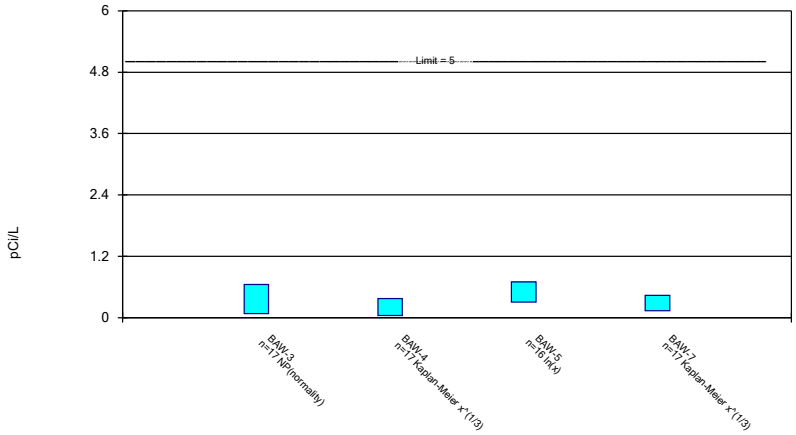


Constituent: Cobalt Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

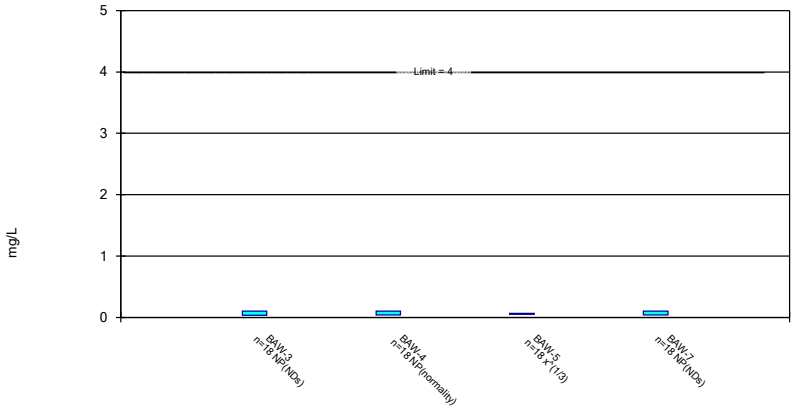


Constituent: Combined Radium 226 + 228 Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

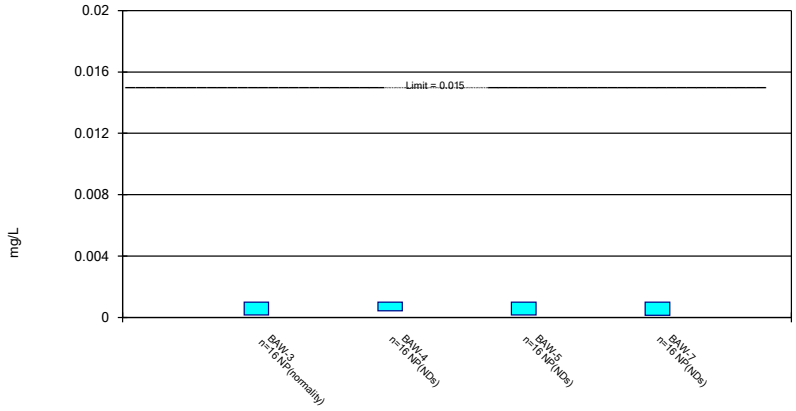


Constituent: Fluoride Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

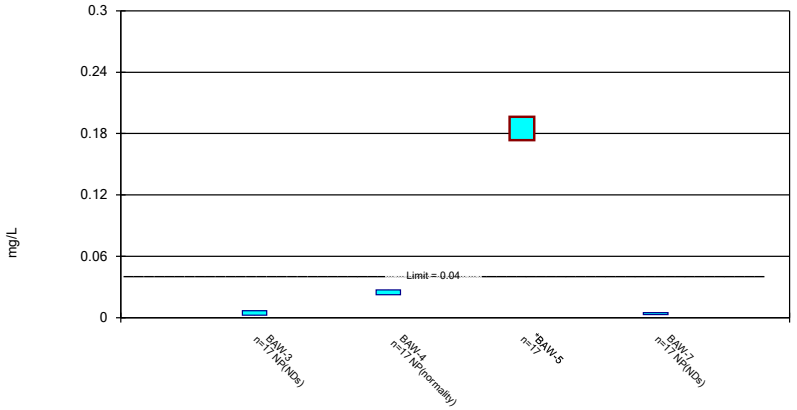


Constituent: Lead Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Parametric and Non-Parametric (NP) Confidence Interval

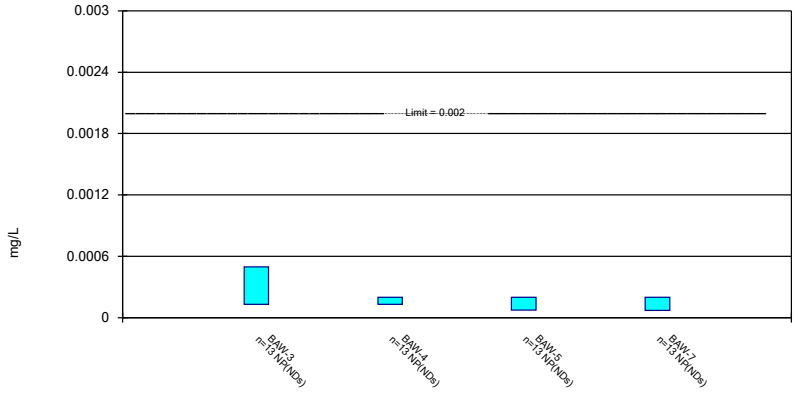
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 1/20/2021 4:47 PM View: Appendix IV
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Non-Parametric Confidence Interval

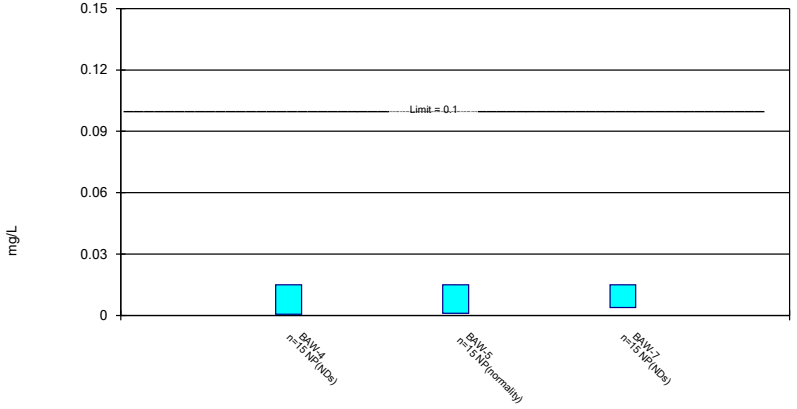
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 1/20/2021 4:47 PM View: Appendix IV
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Non-Parametric Confidence Interval

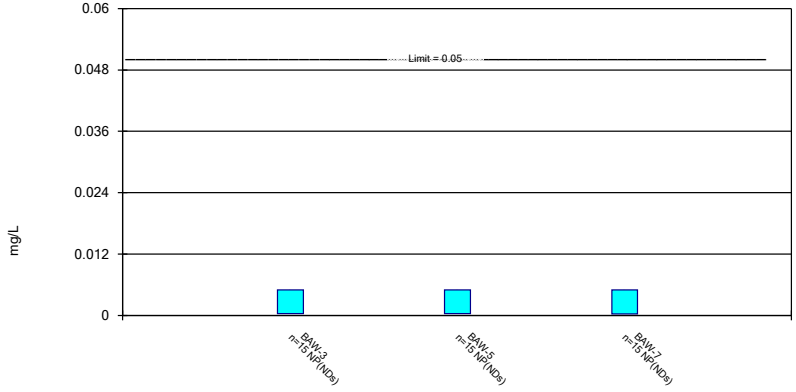
Compliance Limit is not exceeded. Per-well alpha = 0.01.



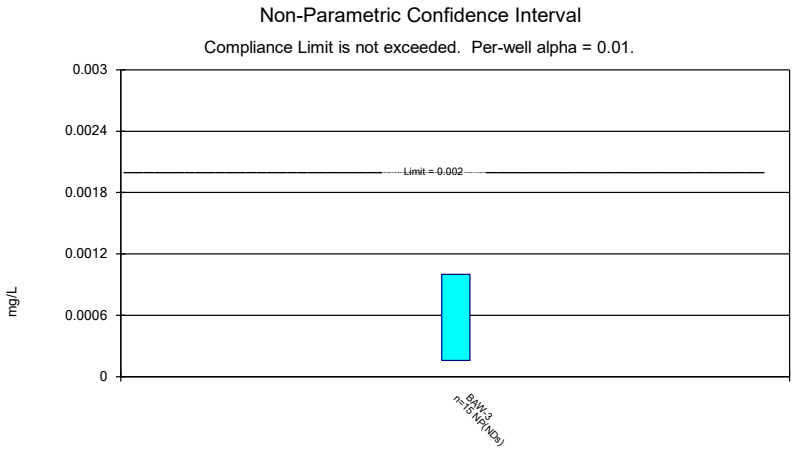
Constituent: Molybdenum Analysis Run 1/20/2021 4:47 PM View: Appendix IV
Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 1/20/2021 4:47 PM View: Appendix IV
Plant Daniel Client: Southern Company Data: Bottom Ash CCR



Constituent: Thallium Analysis Run 1/20/2021 4:47 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-4	BAW-5	BAW-7
3/23/2016	0.00087 (J)	0.0033	<0.001
5/17/2016	<0.001	0.00089 (J)	<0.001
7/12/2016			<0.001
7/13/2016	0.00081 (J)	0.0039	
9/13/2016		0.0039	<0.001
9/14/2016	0.00069 (J)		
11/19/2016	0.0013	0.0037	0.0005 (J)
1/17/2017			<0.001
1/18/2017	<0.001	0.0016	
3/22/2017			0.00052 (J)
3/23/2017	0.00078 (J)	0.0017	
5/24/2017	0.001 (J)	0.0021	<0.001
3/28/2018	<0.001	0.0011 (J)	
3/29/2018			<0.001
6/2/2018	0.00068 (J)	0.0017	<0.001
11/8/2018	<0.001		
11/9/2018		0.0021	<0.001
2/11/2019	0.000737 (J)	0.00232	
2/12/2019			<0.001
4/17/2019	0.000645 (J)	0.00218	
4/18/2019			<0.001
9/27/2019			<0.001
9/30/2019	0.000821 (J)	0.00272	
2/21/2020			<0.001
2/22/2020	0.000837 (J)	0.00177	
4/14/2020	0.000896 (J)	0.00177	<0.001
10/30/2020	0.000529 (J)	0.0013	
11/2/2020			<0.001
Mean	0.0008585	0.002238	0.0009424
Std. Dev.	0.0001831	0.0009515	0.0001628
Upper Lim.	0.0009291	0.002834	0.001
Lower Lim.	0.0007009	0.001642	0.00052

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	0.013	0.011	0.044	0.013
5/17/2016		0.0085	0.055	0.012
5/18/2016	0.012			
7/12/2016				0.011
7/13/2016	0.016	0.0073	0.041	
9/13/2016			0.046	0.012
9/14/2016	0.018	0.0095		
11/19/2016	0.021	0.012	0.044	0.012
1/17/2017	0.029			0.014
1/18/2017		0.0096	0.045	
3/22/2017				0.012
3/23/2017	0.024	0.0093	0.038	
5/24/2017	0.022	0.0096	0.046	0.012
3/28/2018	0.026	0.0086	0.043	
3/29/2018				0.011
6/2/2018	0.029	0.0087	0.043	0.011
11/8/2018	0.028	0.0091		
11/9/2018			0.039	0.011
2/11/2019		0.00931	0.0388	
2/12/2019	0.0274			0.0102
4/17/2019	0.0263	0.00888	0.0378	
4/18/2019				0.0101
9/27/2019				0.0121
9/30/2019	0.0343	0.0103	0.0424	
2/21/2020	0.0304			0.0117
2/22/2020		0.0108	0.0453	
4/14/2020	0.0335	0.00949 (J)	0.0452	0.0124
10/30/2020	0.0349	0.0116	0.0428	
11/2/2020				0.0117
Mean	0.02499	0.009622	0.04331	0.01172
Std. Dev.	0.00709	0.001197	0.004082	0.0009632
Upper Lim.	0.02943	0.01037	0.04577	0.01232
Lower Lim.	0.02055	0.008872	0.04076	0.01111

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-5
3/23/2016	0.00041 (J)	<0.0025
5/17/2016		<0.0025
5/18/2016	<0.0025	
7/13/2016	0.00087 (J)	<0.0025
9/13/2016		<0.0025
9/14/2016	0.00078 (J)	
11/19/2016	0.00054 (J)	<0.0025
1/17/2017	0.00048 (J)	
1/18/2017		<0.0025
3/23/2017	0.00059 (J)	<0.0025
5/24/2017	0.00081 (J)	<0.0025
3/28/2018	0.0008 (J)	<0.0025
6/2/2018	0.001 (J)	<0.0025
11/8/2018	0.00085 (J)	
11/9/2018		<0.0025
2/11/2019		<0.0025
2/12/2019	0.000877 (J)	
4/17/2019	0.000915 (J)	<0.0025
9/30/2019	0.00112 (J)	0.000155 (J)
2/21/2020	0.000962 (J)	
2/22/2020		<0.0025
4/14/2020	0.00107 (J)	<0.0025
10/30/2020	0.00084 (J)	<0.0025
Mean	0.0009067	0.002362
Std. Dev.	0.0004564	0.0005687
Upper Lim.	0.001071	0.0025
Lower Lim.	0.0006494	0.000155

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.002	0.0015 (J)	0.0012 (J)	<0.002
5/17/2016		<0.002	<0.002	<0.002
5/18/2016	<0.002			
7/12/2016				<0.002
7/13/2016	0.003	0.0015 (J)	0.0024 (J)	
9/13/2016			<0.002	<0.002
9/14/2016	<0.002	<0.002		
11/19/2016	<0.002	0.0011 (J)	<0.002	<0.002
1/17/2017	<0.002			<0.002
1/18/2017		<0.002	<0.002	
3/22/2017				<0.002
3/23/2017	<0.002	<0.002	<0.002	
5/24/2017	<0.002	<0.002	<0.002	<0.002
3/28/2018	<0.002	<0.002	0.005	
3/29/2018				<0.002
6/2/2018	<0.002	<0.002	<0.002	<0.002
11/8/2018	<0.002	<0.002		
11/9/2018			<0.002	<0.002
2/11/2019		<0.002	<0.002	
2/12/2019	0.00165 (J)			<0.002
4/17/2019	<0.002	<0.002	<0.002	
4/18/2019				<0.002
9/27/2019				0.00206 (J)
9/30/2019	<0.002	<0.002	<0.002	
2/21/2020	<0.002			<0.002
2/22/2020		<0.002	<0.002	
10/30/2020	<0.002	<0.002	<0.002	
11/2/2020				<0.002
Mean	0.002041	0.001881	0.002163	0.002004
Std. Dev.	0.0002703	0.0002689	0.0007907	1.5E-05
Upper Lim.	0.003	0.002	0.0024	0.00206
Lower Lim.	0.00165	0.0015	0.0012	0.002

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	0.0055	0.00094 (J)	<0.0025	0.0011 (J)
5/17/2016		0.0007 (J)	<0.0025	0.001 (J)
5/18/2016	0.0059			
7/12/2016				0.00091 (J)
7/13/2016	0.0048	0.0016 (J)	0.00042 (J)	
9/13/2016			<0.0025	0.001 (J)
9/14/2016	0.0063	0.0011 (J)		
11/19/2016	0.0056	0.0012 (J)	<0.0025	0.00083 (J)
1/17/2017	0.0046			0.00091 (J)
1/18/2017		0.0011 (J)	<0.0025	
3/22/2017				0.00098 (J)
3/23/2017	0.0049	0.0011 (J)	<0.0025	
5/24/2017	0.0052	0.0012 (J)	<0.0025	0.00098 (J)
3/28/2018	0.0063	0.00095 (J)	<0.0025	
3/29/2018				0.00063 (J)
6/2/2018	0.0068	0.0012 (J)	<0.0025	0.00087 (J)
11/8/2018	0.0068	0.0011 (J)		
11/9/2018			<0.0025	0.00076 (J)
2/11/2019		0.00093 (J)	<0.0025	
2/12/2019	0.00552			0.000661 (J)
4/17/2019	0.00603	0.00116 (J)	<0.0025	
4/18/2019				0.000705 (J)
9/27/2019				0.00071 (J)
9/30/2019	0.0062	0.001 (J)	<0.0025	
2/21/2020	0.00576			0.000634 (J)
2/22/2020		0.000907 (J)	<0.0025	
4/14/2020	0.00633	0.00105 (J)	<0.0025	0.000684 (J)
10/30/2020	0.00657	0.00102 (J)	<0.0025	
11/2/2020				0.000729 (J)
Mean	0.00583	0.001074	0.002378	0.000829
Std. Dev.	0.0006801	0.000188	0.0005045	0.0001507
Upper Lim.	0.006256	0.001192	0.0025	0.0009234
Lower Lim.	0.005404	0.0009562	0.00042	0.0007346

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<5	<5	0.549	<5
5/17/2016		<5	0.551	<5
5/18/2016	<5			
7/12/2016				0.165 (U)
7/13/2016	0.27 (U)	0.0365 (U)	0.859	
9/13/2016			0.367 (U)	0.341 (U)
9/14/2016	-0.0909 (U)	0.3 (U)		
11/19/2016	0.416	<5 (U)	<5 (U)	<5 (U)
1/17/2017	0.412 (U)			0.124 (U)
1/18/2017		0.235 (U)	0.289 (U)	
3/22/2017				0.0719 (U)
3/23/2017	0.0761 (U)	0.168 (U)	0.554	
5/24/2017	0.0415 (U)	-0.0607 (U)	0.831	0.441
3/28/2018	0.398	0.42	0.458	
3/29/2018				0.731
6/2/2018	-0.253 (U)	0.0844 (U)	0.226 (U)	0.303 (U)
11/8/2018	0.343 (U)	0.367 (U)		
11/9/2018			0.298 (U)	0.00226 (U)
2/11/2019		0.0402 (U)	0.15 (U)	
2/12/2019	0.581			0.094 (U)
4/17/2019	0.646	0.493	0.326 (U)	
4/18/2019				0.48
9/27/2019				0.497
9/30/2019	1	0.404		
2/21/2020	0.126 (U)			0.375
2/22/2020		0.53	0.47	
4/14/2020	0.338	0.0408 (U)	0.376 (U)	0.329 (U)
10/30/2020	0.485	0.344	0.528	
11/2/2020				0.535
Mean	0.5758	0.6413	0.5833	0.7052
Std. Dev.	0.7808	0.9036	0.5468	0.8768
Upper Lim.	0.646	0.3729	0.7011	0.4345
Lower Lim.	0.0761	0.03871	0.3058	0.1335

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.1	0.04 (J)	0.06 (J)	<0.1
5/17/2016		0.04 (J)	0.07 (J)	<0.1
5/18/2016	<0.1			
7/12/2016				<0.1
7/13/2016	<0.1	0.05 (J)	0.08 (J)	
9/13/2016			0.06 (J)	<0.1
9/14/2016	<0.1	0.04 (J)		
11/19/2016	<0.1	0.04 (J)	0.06 (J)	<0.1
1/17/2017	<0.1			<0.1
1/18/2017		<0.1	0.05 (J)	
3/22/2017				<0.1
3/23/2017	<0.1	<0.1	0.05 (J)	
5/24/2017	<0.1	0.04 (J)	0.06 (J)	<0.1 (D)
10/16/2017	<0.1	<0.1	0.06 (J)	<0.1
3/28/2018	<0.1	0.04 (J)	0.06 (J)	
3/29/2018				<0.1
6/2/2018	<0.1	0.05 (J)	0.06 (J)	<0.1
11/8/2018	<0.1	0.05 (J)		
11/9/2018			0.06 (J)	<0.1
2/11/2019		<0.1	0.0368 (J)	
2/12/2019	<0.1			<0.1
4/17/2019	<0.1	0.033 (J)	0.0421 (J)	
4/18/2019				<0.1
9/27/2019				<0.1
9/30/2019	<0.1	<0.1	0.045 (J)	
2/21/2020	<0.1			<0.1
2/22/2020		0.0317 (J)	0.0434 (J)	
4/14/2020	0.034 (J)	0.0508 (J)	0.059 (J)	0.0415 (J)
10/30/2020	<0.1	<0.1	<0.1	
11/2/2020				<0.1
Mean	0.09633	0.06142	0.05868	0.09675
Std. Dev.	0.01556	0.02857	0.01461	0.01379
Upper Lim.	0.1	0.1	0.06637	0.1
Lower Lim.	0.034	0.04	0.04969	0.0415

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.001	0.00039 (J)	<0.001	<0.001
5/17/2016		<0.001	<0.001	<0.001
5/18/2016	<0.001			
7/12/2016				<0.001
7/13/2016	<0.001	<0.001	<0.001	
9/13/2016			<0.001	<0.001
9/14/2016	0.00056 (J)	<0.001		
11/19/2016	<0.001	0.00042 (J)	<0.001	<0.001
1/17/2017	<0.001			<0.001
1/18/2017		<0.001	<0.001	
3/22/2017				<0.001
3/23/2017	0.00038 (J)	<0.001	<0.001	
5/24/2017	0.00036 (J)	<0.001	<0.001	<0.001
3/28/2018	<0.001	<0.001	<0.001	
3/29/2018				<0.001
11/8/2018	<0.001	<0.001		
11/9/2018			<0.001	<0.001
2/11/2019		<0.001	<0.001	
2/12/2019	0.000139 (J)			<0.001
4/17/2019	<0.001	<0.001	<0.001	
4/18/2019				<0.001
9/27/2019				0.000129 (J)
9/30/2019	0.000322 (J)	0.000191 (J)	0.000152 (J)	
2/21/2020	0.00015 (J)			<0.001
2/22/2020		<0.001	<0.001	
4/14/2020	0.000236 (J)	<0.001	<0.001	<0.001
10/30/2020	0.000136 (J)	<0.001	<0.001	
11/2/2020				<0.001
Mean	0.0006427	0.0008751	0.000947	0.0009456
Std. Dev.	0.0003828	0.0002724	0.000212	0.0002178
Upper Lim.	0.001	0.001	0.001	0.001
Lower Lim.	0.00015	0.00042	0.000152	0.000129

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	<0.005	0.044	0.17	<0.005
5/17/2016		0.028	0.2	<0.005
5/18/2016	<0.005			
7/12/2016				<0.005
7/13/2016	<0.005	0.026	0.17	
9/13/2016			0.17	<0.005
9/14/2016	<0.005	0.026		
11/19/2016	<0.005	0.026	0.18	0.0035 (J)
1/17/2017	<0.005			<0.005
1/18/2017		0.027	0.2	
3/22/2017				<0.005
3/23/2017	<0.005	0.024	0.19	
5/24/2017	<0.005	0.027	0.21	<0.005
3/28/2018	0.0023 (J)	0.021	0.23	
3/29/2018				0.0026 (J)
6/2/2018	0.002 (J)	0.022	0.19	0.0029 (J)
11/8/2018	0.0024 (J)	0.025		
11/9/2018			0.18	0.0027 (J)
2/11/2019		0.0229	0.161	
2/12/2019	<0.005			<0.005
4/17/2019	0.00197 (J)	0.0236	0.174	
4/18/2019				0.00238 (J)
9/27/2019				0.00375 (J)
9/30/2019	0.00687	0.0249	0.166	
2/21/2020	<0.005			<0.005
2/22/2020		0.0211	0.169	
4/14/2020	<0.005	0.0224	0.192	<0.005
10/30/2020	<0.005	0.0267	0.194	
11/2/2020				<0.005
Mean	0.004444	0.02574	0.1851	0.004284
Std. Dev.	0.00138	0.005177	0.01823	0.001044
Upper Lim.	0.00687	0.027	0.1965	0.005
Lower Lim.	0.0024	0.0224	0.1736	0.0029

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-4	BAW-5	BAW-7
3/23/2016	8.4E-05 (JB)	7.3E-05 (JB)	7.4E-05 (JB)	7.1E-05 (JB)
5/17/2016		<0.0002	<0.0002	<0.0002
5/18/2016	<0.0002			
7/12/2016				<0.0002
7/13/2016	<0.0002	<0.0002	<0.0002	
9/13/2016			<0.0002	<0.0002
9/14/2016	<0.0002	<0.0002		
11/19/2016	<0.0002	<0.0002	<0.0002	<0.0002
1/17/2017	<0.0002			<0.0002
1/18/2017		<0.0002	<0.0002	
3/22/2017				<0.0002
3/23/2017	0.00013 (J)	0.00013 (J)	<0.0002	
5/24/2017	<0.0002	<0.0002	<0.0002	<0.0002
3/28/2018	<0.0002	<0.0002	<0.0002	
3/29/2018				<0.0002
2/11/2019		<0.0002	<0.0002	
2/12/2019	<0.0002			<0.0002
4/17/2019	<0.0002	<0.0002	<0.0002	
4/18/2019				<0.0002
2/21/2020	<0.0002			<0.0002
2/22/2020		<0.0002	<0.0002	
10/30/2020	0.000497	<0.0002	<0.0002	
11/2/2020				<0.0002
Mean	0.0002085	0.0001848	0.0001903	0.0001901
Std. Dev.	9.382E-05	3.878E-05	3.495E-05	3.578E-05
Upper Lim.	0.000497	0.0002	0.0002	0.0002
Lower Lim.	0.00013	0.00013	7.4E-05	7.1E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-4	BAW-5	BAW-7
3/23/2016	<0.015	0.0026 (J)	<0.015
5/17/2016	<0.015	0.0011 (J)	<0.015
7/12/2016			<0.015
7/13/2016	<0.015	0.0079 (J)	
9/13/2016		0.0038 (J)	<0.015
9/14/2016	<0.015		
11/19/2016	<0.015	0.0014 (J)	<0.015
1/17/2017			<0.015
1/18/2017	<0.015	0.001 (J)	
3/22/2017			0.0038 (J)
3/23/2017	<0.015	<0.015	
5/24/2017	<0.015	0.0014 (J)	<0.015
3/28/2018	<0.015	<0.015	
3/29/2018			<0.015
11/8/2018	<0.015		
11/9/2018		<0.015	<0.015
2/11/2019	<0.015	<0.015	
2/12/2019			<0.015
4/17/2019	<0.015	<0.015	
4/18/2019			<0.015
2/21/2020			<0.015
2/22/2020	0.000616 (J)	0.000627 (J)	
4/14/2020	<0.015	0.000747 (J)	<0.015
10/30/2020	<0.015	<0.015	
11/2/2020			<0.015
Mean	0.01404	0.007372	0.01425
Std. Dev.	0.003714	0.006685	0.002892
Upper Lim.	0.015	0.015	0.015
Lower Lim.	0.000616	0.001	0.0038

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3	BAW-5	BAW-7
3/23/2016	0.00033 (J)	<0.005	<0.005
5/17/2016		<0.005	0.00026 (J)
5/18/2016	<0.005		
7/12/2016			<0.005
7/13/2016	0.00041 (J)	<0.005	
9/13/2016		<0.005	0.00031 (J)
9/14/2016	0.00079 (J)		
11/19/2016	<0.005	<0.005	<0.005
1/17/2017	<0.005		<0.005
1/18/2017		<0.005	
3/22/2017			0.0021
3/23/2017	<0.005	<0.005	
5/24/2017	0.00028 (J)	0.00033 (J)	0.00026 (J)
3/28/2018	0.00038 (J)	<0.005	
3/29/2018			0.00036 (J)
6/2/2018	0.00031 (J)	<0.005	<0.005
11/8/2018	0.00088 (J)		
11/9/2018		<0.005	<0.005
2/11/2019		<0.005	
2/12/2019	<0.005		<0.005
4/17/2019	<0.005	<0.005	
4/18/2019			<0.005
2/21/2020	<0.005		<0.005
2/22/2020		<0.005	
10/30/2020	<0.005	<0.005	
11/2/2020			<0.005
Mean	0.002892	0.004689	0.003553
Std. Dev.	0.002338	0.001206	0.002162
Upper Lim.	0.005	0.005	0.005
Lower Lim.	0.00033	0.00033	0.00031

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 1/20/2021 4:49 PM View: Appendix IV

Plant Daniel Client: Southern Company Data: Bottom Ash CCR

	BAW-3
3/23/2016	<0.001
5/18/2016	<0.001
7/13/2016	<0.001
9/14/2016	9.5E-05 (J)
11/19/2016	<0.001
1/17/2017	<0.001
3/23/2017	<0.001
5/24/2017	<0.001
3/28/2018	<0.001
11/8/2018	8.5E-05 (J)
2/12/2019	<0.001
4/17/2019	<0.001
2/21/2020	0.000276 (J)
4/14/2020	0.000158 (J)
10/30/2020	<0.001
Mean	0.0007743
Std. Dev.	0.0003896
Upper Lim.	0.001
Lower Lim.	0.000158