Georgia Power Company - Plant Yates
AP-3, A, B, and B' / R6 CCR Landfill

Newnan, Georgia
Coweta County

2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

Atlantic Coast Consulting, Inc.

PROESSIONAL CERTIFICATION

This *2019 Annual Groundwater Monitoring and Corrective Action Report*, *Georgia Power Company - Plant Yates AP-3, A, B, and B' / R6 CCR Landfill* has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Atlantic Coast Consulting, Inc.

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TABLE OF CONTENTS

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule (40 CFR 257 § 257 Subpart D) and the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10, Atlantic Coast Consulting, Inc. (ACC), has prepared this Annual Groundwater Monitoring Report and Corrective Action Report to document groundwater monitoring activities at Georgia Power Company's (GPC's) Plant Yates AP-3, A, B, and B' / R6 CCR Landfill (Site).

To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the USEPA CCR Rule. For ease of reference, the USEPA CCR rules are cited within this report. This report presents the results of both semi-annual monitoring events conducted in 2019 at the Site and serves as both the second semi-annual report in accordance with 391-3-4-.10(6)(a) and combined annual monitoring in accordance with 40 CFR § 257.90(e).

Two permit application packages were submitted to GA EPD in November 2018: (1) one for AP-3, A, B, and B', and (2) one for R6 CCR Landfill. Both permits propose combining the monitoring systems of AP-3, A, B, and B', and R6 Landfill (collectively, the 'CCR Units') into a single multi-unit monitoring system that meets Federal and State monitoring requirements. Although the permits have not yet been approved, GPC proactively began monitoring R6 Landfill as part of a combined multi-unit monitoring program. Groundwater monitoring and reporting for the CCR Units is performed in accordance with the monitoring requirements §§ 257.90 through 257.95 of the Federal CCR rule and GA EPD rule 391-3-4-.10(6)(a)-(c). Due to the configuration of the units and overall groundwater flow direction, a combined multi-unit groundwater monitoring network for the CCR Units is proposed in the permit packages.

Reports for AP-3, A, B and B' were previously completed per 40 CFR § 257.90(e), and those sites have been placed in assessment monitoring according to § 257.95 An Assessment of Corrective Measures (ACM) Report was completed for AP-3, A, B, and B' in June 2019 per 40 CFR § 257.96 to address a statistically significant level (SSL) of beryllium in samples from groundwater monitoring well YGWC-33S. Data from YAMW-1 and PZ-35 confirm that the respective vertical and lateral extent of beryllium concentrations above the groundwater protection standard (GWPS) is limited to the immediate vicinity of YGWC-33S. The initial groundwater monitoring report for R6 CCR Landfill was competed on July 31, 2019 (ACC, 2019). R6 CCR Landfill initiated assessment monitoring on November 13, 2019. Assessment monitoring data for R6 CCR Landfill will be statistically evaluated in 2020. This report and subsequent semi-annual reports will include combined results for AP-3, A, B and B' / R6 CCR Landfill.

1.1 Site Description and Background

Plant Yates is located at 708 Dyer Road, on the east bank of the Chattahoochee River in Coweta County, Georgia near the Coweta and Carroll County line, approximately 8 miles northwest of the city of Newnan and 13 miles southeast of the city of Carrollton. Plant Yates occupies approximately 2,400 acres. Figure 1, Site Location Map, depicts the site location relative to the surrounding area.

1.2 Regional Geology and Hydrogeologic Setting

Plant Yates is located in the Inner Piedmont Physiographic Province of western Georgia, immediately southeast of the regional zone of deformation referred to as the Brevard Zone. Rock units at Plant Yates are primarily interlayered gneiss and schists. The rocks in the area have been

subjected to several episodes of metamorphism and intrusion by igneous bodies. Extensive jointing occurs in the area. Surface expressions of the joints are observed on topographic maps and aerial photos of the Plant Yates area.

A thin layer of soil from one to two feet thick overlies a thick layer of saprolite. The saprolite, which extends to typical depths of 20-40 feet below ground surface, was formed in-place by the physical and chemical weathering of the underlying metamorphic rocks. There is typically a zone of variable thickness (approximately 5-20 feet) of transitionally weathered rock between the saprolite and competent bedrock. Localized alluvial soils consisting of generally coarser material (silty-sand, clayey silt, and silty clay with well-rounded gravel and cobbles) than that observed in saprolite may be related to historical river channel migration.

At Plant Yates, groundwater is typically encountered slightly above the saprolite/weathered rock interface. Groundwater flow in the saprolite zone is through interconnected pores and relict textures and fractures. As the rock becomes increasing competent with depth groundwater flow occurs mainly through joints and fractures (i.e. secondary porosity). Recharge to the water-bearing zones in fractured bedrock takes place by seepage through the overlying mantle of soil/saprolite, or by direct entrance through openings in outcrops. The average depth of the water table at Plant Yates varies with topography, ranging from approximately 5 to 50 feet below ground surface. The water table occurs in the saprolite and in the transitionally weathered zone, at least several feet above the top of rock.

In-situ slug tests were performed in saprolite and weathered bedrock at multiple locations on the site. The hydraulic conductivity at these locations is typically in a range from 10^{-3} to 10^{-4} centimeters per second, based on multiple rising-head and falling-head slug tests. This indicates a fairly uniform medium across the saprolite and weathered rock horizon. The values from the field test fall within the standard range of hydraulic conductivity values associated with a silty sand.

1.3 Groundwater Monitoring System and CCR Units

Pursuant to § 257.91, a multi-unit groundwater monitoring system was installed within the uppermost aquifer at the Site. The multi-unit monitoring system is designed to monitor groundwater passing the waste boundary of the CCR Units within the uppermost aquifer. Figure 2, Well Location Map, shows the monitoring well locations. Wells were located to serve as upgradient and downgradient monitoring points based on groundwater flow direction (Table 1A, Monitoring Network Well Summary, and Table 1B, Non-Network Well Summary).

As typical of the Piedmont Physiographic Province, there is a high degree of connectivity between the overburden, partially weathered rock, fractured bedrock, and the materials comprise a single uppermost aquifer. Based on the site hydrogeology, the monitoring system is designed to monitor groundwater flow in the overburden, the transition-zone, and the upper bedrock as a single inter-connected aquifer system. Wells suffixed with an "S" are installed in overburden (saprolitic soil), an "I" indicates partially weathered rock (transition zone), and "D" indicates upper bedrock. The monitoring well network for the Site is provided on Figure 2, Well Location Map.

2.0 GROUNDWATER MONITORING ACTIVITIES

Pursuant to 40 CFR § 257.90(e), the following describes monitoring-related activities performed during 2019 and discusses any status changes of the monitoring program. All groundwater sampling was performed in accordance with § 257.93. Samples were collected from each well in the certified monitoring system shown on Figure 2.

Pursuant to § 257.90(e)(3), Table 2, 2019 Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed at the Site during 2019. During the semiannual events, groundwater samples were collected for both Appendix III and the Appendix IV constituents detected during the annual initial assessment events at each monitoring well. Results of sampling analysis conducted during 2019 are presented in Appendix A, Laboratory Analytical and Field Sampling Reports.

2.1 Monitoring Well Installation and Maintenance

Monitoring well-related activities were limited to visual inspection of well conditions prior to sampling, recording the site conditions, and performing exterior maintenance to provide safe access for sampling. Four new wells for groundwater characterization and one piezometer were installed downgradient of R6 Landfill. The boring logs and well installation diagrams are included in Appendix B, Semiannual Remedy Selection and Design Progress Report.

2.2 Detection Monitoring

The multi-unit groundwater monitoring program for ash ponds AP-3, A, B, and B' were in assessment monitoring in 2019. Although in assessment, the wells continue to be sampled semi-annually for the Appendix III detection monitoring parameters.

Following completion of the eight independent sampling events at the R6 CCR Landfill, the first detection groundwater samples were collected in March 2019 and analyzed for Appendix III constituents.

2.3 Assessment Monitoring

Assessment monitoring was initiated at AP-3, A, B, and B' in 2018. Based on results of the March 2019 monitoring event, assessment monitoring was initiated at the R6 CCR Landfill. A notice of assessment monitoring was placed in the operating record for the R6 CCR Landfill on November 13, 2019. As of this report, AP-3, A, B, and B', and R6 CCR Landfill remain in assessment monitoring.

In accordance with § 257.95(b) monitoring wells for the AP-3, A, B, and B' network and the R6 CCR Landfill were sampled for all Appendix IV parameters in March and August 2019, respectively. Subsequent semiannual assessment monitoring events for AP-3, A, B, and B' occurred in March/April and September 2019. The first semiannual assessment monitoring event for the R6 CCR Landfill occurred in October 2019. Assessment monitoring events included Appendix III parameters and those Appendix IV parameters detected above the laboratory method detection limit (MDL) during the full Appendix IV event in accordance with 40 CFR §257.95(d). A summary of groundwater sampling events completed during 2019 is provided in Table 2. Beginning in 2020 the sampling schedules will be realigned so that monitoring events for both units occur during the same mobilization.

2.4 Other Groundwater Sampling

To further characterize groundwater quality at the site, additional samples were collected from wells YAMW-1 and YGWC-36 in December 2019 and from YAMW-1 in January 2020. Well locations are presented on Figure 2. Sampling and analysis were performed following the procedures described in Section 3.0. Analytical results from the additional sampling of YGWC-36 and YAMW-1 are included in Appendix A and B, respectively.

2.5 Assessment of Corrective Measures

Based on assessment monitoring results presented in the *2018 Annual Groundwater and Corrective Action Monitoring Report*, an ACM was implemented for AP-3, A, B, and B' on January 13, 2019 in accordance with 40 CFR § 257.96 and posted to the Operating Record on June 12, 2019. A semiannual ACM status update report was posted to the operating record on December 12, 2019. That document has been updated to include recent activities and is provided as Appendix B. Subsequent Semiannual Remedy Selection and Design Progress Reports will be included with routine semiannual groundwater reports.

3.0 SAMPLE METHODOLOGY & ANALYSES

The following sections describe the methods used to conduct groundwater monitoring at the Site.

3.1 Groundwater Flow Direction, Gradient, and Velocity

Prior to each assessment sampling event, groundwater elevations were recorded from piezometers and each well in the network. Groundwater elevations recorded during the monitoring events are summarized in Tables 3A through 3E, Summary of Groundwater Elevations. Groundwater elevation data were used to develop potentiometric surface elevation contour maps (Figures 3-5, Water Table Contour Maps). The general direction of groundwater flow across the site is towards the north-northwest. The groundwater flow patterns observed during the 2019 monitoring events are consistent with historical patterns.

The groundwater flow velocity at Plant Yates was calculated using a derivation of Darcy's Law.

Specifically:

Equation

$$v = \frac{K\,(dh/dl)}{P_e}$$

where: v = ground water velocity
K = hydraulic conductivity
dh/dl = hydraulic gradient
P_e = effective porosity

Groundwater flow velocities were calculated for the site based on hydraulic gradients, average hydraulic conductivity based on previous slug test data from the Site, and an estimated effective porosity of 0.20 (based on a review of several sources, including Driscoll, 1986; USEPA, 1989; Freeze and Cherry, 1979). Groundwater flow velocities have been calculated and are tabulated on Tables 4A through 4C, Groundwater Flow Velocity Calculations. The calculated flow velocities ranged between 0.027 to 1.04 feet per day or 9.9 to 380 feet per year.

3.2 Groundwater Sampling

Groundwater samples were collected using low-flow sampling procedures in accordance with 40 CFR § 257.93(a). Purging and sampling was primarily performed using bladder pumps dedicated to each well. For wells sampled with peristaltic pumps, tubing was lowered into the well so that the intake was at the midpoint of the well screen (or as appropriate determined by the water level). Peristaltic pump samples were collected using new disposable polyethylene tubing. All non-disposable equipment was decontaminated before use and between well locations.

Monitoring wells were purged and sampled using low-flow sampling procedures. A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters [pH, conductivity, and dissolved oxygen (DO)] during well purging to verify stabilization prior to sampling. Turbidity was measured using a Hach 2100Q portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

- ± 0.1 standard units for pH
- ± 10% for specific conductance
- ± 10% for DO where DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L.
- Turbidity measurements less than 10 nephelometric turbidity units (NTU)

Once stabilization was achieved, samples were collected directly into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC (Pace) of Peachtree Corners, Georgia and Greensburg, Pennsylvania following chain-of-custody protocol. Stabilization logs for each well during each monitoring event are included in Appendix A.

3.3 Laboratory Analyses

Samples collected from R6 CCR landfill during the March 2019 detection monitoring event were analyzed for Appendix III parameters. Groundwater samples collected during the semiannual assessment events were analyzed for Appendix III and those Appendix IV parameters detected above the laboratory method detection limit (MDL) during the initial assessment sampling events in accordance with 40 CFR § 257.95(d). Parameters not detected in the March initial assessment sampling event included: chromium, mercury, and molybdenum. Parameters not detected in the August initial assessment sampling event for the R6 CCR Landfill included: antimony, mercury, and thallium. Analytical methods used for groundwater monitoring parameters are provided in laboratory reports in Appendix A.

Analytical data collected in the 2019 monitoring event are summarized in Tables 5A through 5F, Summary of Groundwater Analytical Data.

Laboratory analyses were performed by Pace. Pace is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintains a NELAP certification for all parameters analyzed for this project. In addition, Pace is certified to perform analysis by the State of Georgia. Laboratory reports and chain-of-custody records for the monitoring events are presented in Appendix A.

3.4 Quality Assurance and Quality Control Summary

During each sampling event, quality assurance/quality control (QA/QC) samples are collected at a rate of one QA/QC sample per every 10 groundwater assessment samples. Equipment blanks (where non-dedicated sampling equipment is used) and duplicate samples were collected during each sampling event. QA/QC sample data were evaluated during data validation and are included in Appendix A.

Groundwater quality data in this report was validated in accordance with USEPA guidance (USEPA, 2011) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences, post digestions spikes, laboratory and field duplicate relative percent differences (RPD), field and equipment blanks, and laboratory reporting limits (RL). Where appropriate, validation qualifiers and flags

are applied to the data using USEPA procedures as guidance (USEPA, 2017). A summary of the data validation is included in Appendix A.

Values followed by a "J" flag indicate that the value is an estimated analyte concentration detected between the method detection limit (MDL) and the RL. The estimated value is positively identified but is below the lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions. "J" flagged data are used to establish background statistical limits but are not used when performing statistical analyses.

4.0 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 MacStat Consulting, Ltd, in accordance with 40 CFR § 257.93(f) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, USEPA 530/R-09-007 (USEPA, 2009). To develop the statistical method, analytical data collected during the background period were evaluated and used to develop statistical limits for each Appendix III parameter. Subsequent detection monitoring results were compared to the statistical limits to determine if concentrations were statistically different from background.

4.1 Statistical Methods

Sanitas groundwater statistical software was 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 USEPA regulations. Although Assessment Monitoring has been implemented for the network, statistical evaluation of Appendix III constituents is performed to determine if constituents have returned to background conditions.

4.1.1 Appendix III Constituents

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. A summary of the statistical methodology used at the Site for routine groundwater monitoring is provided in Table 6, Summary of Statistical Methods.

4.1.2 Appendix IV Assessment Monitoring Statistics

Parametric tolerance limits were used to calculate background limits from 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 upon the number of background samples. The background limits were then used when determining the GWPS established under 40 CFR § 257.95(h) and GA EPD Rule 391-3-4-.10(6)(a).

As described in 40 CFR § 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 mg/L);
    (ii) Lead (0.015 mg/L)
    (iii) Lithium (0.040 mg/L);
    (iv) Molybdenum (0.100 mg/L).

(3) Background levels for constituents where the background level is higher than the MCL or rule-identified GWPS.

USEPA revised the Federal CCR Rule on July 30, 2018, providing GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR 257.95(h)(2). Presently those updated GWPS have not yet been incorporated in the current GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); and therefore, background concentrations are considered when determining the GWPS for constituents where an MCL has not been established (or where background is higher than the MCL). Under the existing GA EPD rules, the GWPS is:

(1) The MCL;
(2) Where an MCL has not been established, the background concentration;
(3) Background levels for constituents where the background level is higher than the MCL.

Following the above Federal and State rule requirements, GWPS have been established for statistical comparison of Appendix IV constituents at AP-3, A, B, B'. Table 7, Summary of Background Levels and Groundwater Protection Standards, summarizes the background limit established at each monitoring well and the GWPS established under State and Federal rules.

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 established under the State and Federal rules. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its respective standard.

Statistical analysis of the R6 CCR Landfill assessment monitoring results for the October 2019 sampling event will be completed in in 2020 following the requirements of 40 CFR 257.95(d).

4.2 Statistical Analysis Results

Analytical data from the 2019 semiannual monitoring events in March, April, September, and October 2019 were statistically analyzed in accordance with the Statistical Analysis Plan. Appendix III statistical analysis for wells associated with the Site was performed to determine if constituents have returned to background levels. Appendix IV assessment monitoring parameters were evaluated for AP-3, A, B, and B' to determine if concentrations statistically exceeded the established GWPS. Statistical analyses were not performed for the R6 Landfill and will be evaluated in 2020. The statistical analysis and comparison to prediction limits are included as Appendix D, Statistical Analyses.

Based on review of the Appendix III statistical analyses presented in Appendix C, Appendix III constituents have not returned to background levels and assessment monitoring should continue pursuant to 40 CFR § 257.95(f).

4.2.1 First Semiannual Detection Monitoring Event (R6 CCR Landfill)

Appendix III analytical data from the initial detection monitoring event at R6 CCR Landfill in March 2019 were statistically analyzed and SSIs were identified. Assessment monitoring was initiated at the R6 CCR Landfill beginning with the second 2019 semiannual monitoring event Assessment monitoring results from for R6 CCR Landfill are summarized Table 5F and analytical reports are included in Appendix A.

4.2.2 First Semiannual Assessment Monitoring Event (AP-3, B, and B')

Statistical analysis of Appendix IV data identified two constituents at SSLs above the established GWPS at groundwater monitoring well YGWC-33S. The GWPS for beryllium and cobalt occur using the GWPS derived following the updated Federal CCR rules or the existing GA EPD rules. The lower 95% confidence levels for beryllium and cobalt at YGWC-33S statistically exceed the respective GWPS of 0.004 and 0.013 milligrams per liter (mg/L).

4.2.3 Second Semiannual Assessment Monitoring Event (All Units)

The same SSLs were identified for wells associated with the AP-3, A, B, and B' monitoring network during the second semiannual assessment monitoring event.

5.0 MONITORING PROGRAM STATUS

5.1 Routine Monitoring Program

In accordance with 40 CFR § 257.94(e), an assessment monitoring program was implemented in January 2018 for AP-3, A, B, and B'. SSLs of Appendix IV parameters were identified at the multi-unit network during the 2019 assessment monitoring events. Pursuant to 40 CFR § 257.96(b), GPC will continue to monitor the groundwater at AP-3, A, B, and B' in accordance with the assessment monitoring program regulations of 40 CFR § 257.95 while ACM efforts are implemented to evaluate SSL concentrations of cobalt and beryllium. Pursuant to 40 CFR § 257.195(g)((1)(iv), additional delineation wells will continue to be sampled as part of the ongoing semi-annual assessment groundwater monitoring program. R6 CCR Landfill was placed in assessment monitoring following the initial detection monitoring event completed in March 2019. A notification of the establishment of an assessment monitoring program at R6 CCR Landfill was placed in the operating record on November 13, 2019. R6 CCR Landfill will remain in Assessment Monitoring. Statistical comparisons of Appendix IV parameters to GWPS for R6 Landfill will be evaluated in 2020.

5.2 Assessment of Corrective Measures

The ACM efforts completed during the reporting period covered by this groundwater monitoring and corrective action report are presented in the *Supplemental Semi-Annual Remedy Selection and Design Progress Report* provided in Appendix B. The Semi-Annual Progress Report summarizes:

(i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (ACC, 2019);

(ii) the analytical data obtained during supplemental ACM-specific field investigations;

(iii) the status of evaluating applicable corrective measures; and

(iv) the planned activities and anticipated schedule for the following semi-annual reporting period.

GPC will include future Semi-Annual Progress Reports with each groundwater monitoring and corrective action report.

6.0 CONCLUSIONS AND FUTURE ACTIONS

The Site has completed an ACM and is continuing to perform assessment monitoring pursuant to § 257.95. Statistical evaluations of the groundwater monitoring data for the Site identified SSLs of beryllium and cobalt in well YGWC-33S during the 2019 sampling events. The Site will continue assessment monitoring at AP-3, A, B, B', and R6 CCR Landfill pursuant to § 257.95 and continue to assess corrective measures as required by § 257.96 at AP-3, A, B, and B'.

Beginning in 2020 the sampling schedules will be realigned so that monitoring events for the combined AP-3, A, B, B', and R6 CCR Landfill monitoring networks occur during the same mobilization. The next scheduled groundwater monitoring event is scheduled for the first quarter of 2020 and will include collection of Appendix IV analytes from both units. Subsequent semiannual monitoring events will include the collection of Appendix III analytes and Appendix IV constituents detected in one or more of the combined network wells.

7.0 REFERENCES

Atlantic Coast Consulting, June 12, 2019, *Plant Yates, Ash Ponds 3, A, B and B' - 2019 Assessment of Corrective Measures Report.*

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TABLES

Table 1A
Monitoring Network Well Summary

Well ID	Installation Date (mm/dd/yyyy)	Bottom Depth (ft BTOC)	Bottom Elevation (ft MSL)	Depth to Top of Screen (ft MSL)	Top of Screen Elevation (ft MSL)	Purpose
AP-3, A, B, and B'						
YGWA-4I	05/21/2014	48.70	735.48	38.37	745.81	Upgradient
YGWA-5I	05/21/2014	57.60	726.93	47.27	737.26	Upgradient
YGWA-5D	05/21/2014	128.80	655.73	78.47	706.06	Upgradient
YGWA-17S	09/10/2015	40.10	742.93	29.77	753.26	Upgradient
YGWA-18S	09/08/2015	40.30	750.23	29.97	760.56	Upgradient
YGWA-18I	09/08/2015	80.00	710.56	69.67	720.89	Upgradient
YGWA-20S	09/29/2015	29.52	737.78	19.19	748.11	Upgradient
YGWA-21I	09/28/2015	80.35	703.27	70.02	713.60	Upgradient
YGWC-23S	09/21/2015	29.79	734.83	19.46	745.16	Downgradient
YGWC-24S	09/16/2015	57.57	706.55	47.24	716.88	Downgradient
YGWC-33S	03/03/2016	38.53	706.01	28.33	716.21	Downgradient
YGWC-36	07/20/2016	55.86	683.67	45.53	694.00	Downgradient
YGWC-49	07/13/2016	78.83	703.89	68.83	713.89	Downgradient
R6 CCR Landfill						
YGWA-39	7/7/2016	68.61	749.40	58.31	759.70	Upgradient
YGWA-40	7/7/2016	48.34	767.40	38.04	777.70	Upgradient
YGWC-38	7/23/2016	64.45	749.60	54.15	759.90	Downgradient
YGWC-41	7/8/2016	67.53	736.50	57.23	746.80	Downgradient
YGWC-42	7/8/2016	59.65	740.75	49.65	750.75	Downgradient
YGWC-43	7/9/2016	78.69	669.49	68.69	679.49	Downgradient

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.

Table 1B
Non-Network Well Summary

Well ID	Installation Date (mm/dd/yyyy)	Bottom Depth (ft BTOC)	Bottom Elevation (ft MSL)	Depth to Top of Screen (ft MSL)	Top of Screen Elevation (ft MSL)	Purpose
AP-3, A, B, and B'						
YGWA-6S	05/19/2014	39.60	742.68	29.27	753.01	Piezometer
YGWA-6I	05/19/2014	69.10	713.48	58.77	723.81	Piezometer
YAMW-1	09/19/2018	69.66	674.10	59.66	684.10	Downgradient
PZ-04S	05/21/2014	32.97	751.56	22.64	761.89	Piezometer
PZ-05S	05/21/2014	41.90	742.74	31.57	753.07	Piezometer
PZ-06D	05/19/2014	135.85	646.08	85.52	696.41	Piezometer
PZ-24I	09/16/2015	89.79	674.54	79.46	684.87	Piezometer
PZ-35	07/20/2016	49.37	694.37	39.04	704.70	Downgradient
PZ-48	07/11/2016	59.04	720.84	48.71	731.17	Piezometer
R6 CCR Landfill						
PZ-37	07/6/2016	49.70	710.83	39.70	720.83	Piezometer

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. YAMW-1 and PZ-35 used for downgradient characterization of YGWC-33S.

Table 2
2019 Groundwater Sampling Event Summary

Well	Hydraulic Location	Mar. 4-6, 2019	Mar. 28 - Apr. 9, 2019	Aug. 21-22, 2019	Sept. 24-27, 2019	Oct. 9, 2019
Purpose of Sampling Event		Assessment	First Semiannual	Assessment	Second Semiannual	Second Semiannual
AP-3, A, B, and B'						
YGWA-4I	Upgradient	Scan	A-03	--	A-04	--
YGWA-5I	Upgradient	Scan	A-03	--	A-04	--
YGWA-5D	Upgradient	Scan	A-03	--	A-04	--
YGWA-17S	Upgradient	Scan	A-03	--	A-04	--
YGWA-18S	Upgradient	Scan	A-03	--	A-04	--
YGWA-18I	Upgradient	Scan	A-03	--	A-04	--
YGWA-20S	Upgradient	Scan	A-03	--	A-04	--
YGWA-21I	Upgradient	Scan	A-03	--	A-04	--
YGWC-23S	Downgradient	Scan	A-03	--	A-04	--
YGWC-24S	Downgradient	Scan	A-03	--	A-04	--
YGWC-33S	Downgradient	Scan	A-03	--	A-04	--
YGWC-36	Downgradient	Scan	A-03	--	A-04	--
YGWC-49	Downgradient	--	D-01	--	A-01	--
R6 CCR Landfill						
YGWA-39	Upgradient	--	D-01	Scan	--	A-01
YGWA-40	Upgradient	--	D-01	Scan	--	A-01
YGWC-38	Downgradient	--	D-01	Scan	--	A-01
YGWC-41	Downgradient	--	D-01	Scan	--	A-01
YGWC-42	Downgradient	--	D-01	Scan	--	A-01
YGWC-43	Downgradient	--	D-01	Scan	--	A-01

Notes:
1. Scan = All Appendix IV.
2. A-XX = Assessment Event Number (Appendix III and Detected Appendix IV).
3. D-XX = Detection Event Number.
4. -- = Did not sample.

Atlantic Coast Consulting, Inc.

Table 3A
Summary of Groundwater Elevations
February 2019

Well ID	TOC Elevation (ft MSL)	Depth-to-Water (ft BTOC)	Groundwater Elevation (ft MSL)
YGWA-4I	784.18	19.79	764.39
YGWA-5I	784.53	15.75	768.78
YGWA-5D	784.53	23.91	760.62
YGWA-6S	782.28	16.66	765.62
YGWA-6I	782.58	17.12	765.46
YGWA-17S	783.03	10.02	773.01
YGWA-18S	790.53	17.35	773.18
YGWA-18I	790.56	20.92	769.64
YGWA-20S	767.30	11.01	756.29
YGWA-21I	783.62	28.11*	755.51
YGWC-23S	764.62	15.19*	749.43
YGWC-24S	764.12	26.56	737.56
YGWC-33S	744.54	12.47*	732.07
YGWC-36	739.53	9.65*	729.88
YGWC-38	799.45	29.57*	769.88
YGWA-39	817.99	24.15	793.84
YGWA-40	815.63	23.89	791.74
YGWC-41	803.83	28.23	775.60
YGWC-42	797.75	28.99	768.76
YGWC-43	744.99	13.79	731.20
YGWC-49	782.72	29.81	752.91
YAMW-1	743.76	11.54	732.22
PZ-04S	784.53	21.45	763.08
PZ-05S	784.64	15.62	769.02
PZ-06D	781.93	20.37	761.56
PZ-24I	764.33	27.49	736.84
PZ-35	743.74	11.81	731.93
PZ-37	760.53	16.11*	744.22
PZ-48	779.88	18.14	761.74

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. Depths to water measured February 25-26, 2019.

* Depth to water recorded from transducer reading on February 25, 12:00 pm.

Atlantic Coast Consulting, Inc.

Table 3B
Summary of Groundwater Elevations
March 2019

Well ID	TOC Elevation (ft MSL)	Depth-to-Water (ft BTOC)	Groundwater Elevation (ft MSL)
YGWA-4I	784.18	19.03	765.15
YGWA-5I	784.53	15.49	769.04
YGWA-5D	784.53	22.57	761.96
YGWA-6S	782.28	16.62	765.66
YGWA-6I	782.58	17.17	765.41
YGWA-17S	783.03	11.05	771.98
YGWA-18S	790.53	17.15	773.38
YGWA-18I	790.56	20.78	769.78
YGWA-20S	767.30	11.10	756.20
YGWA-21I	783.62	27.66*	755.96
YGWC-23S	764.62	16.07*	748.55
YGWC-24S	764.12	26.67	737.45
YGWC-33S	744.54	13.22*	731.32
YGWC-36	739.53	10.00*	729.53
YGWC-38	799.45	28.97*	770.48
YGWA-39	817.99	22.41	795.58
YGWA-40	815.63	23.82	791.81
YGWC-41	803.83	25.62	778.21
YGWC-42	797.75	25.45	772.30
YGWC-43	744.99	14.08	730.91
YGWC-49	782.72	29.34	753.38
YAMW-1	743.76	12.08	731.68
PZ-04S	784.53	20.65	763.88
PZ-05S	784.64	15.40	769.24
PZ-06D	781.93	20.12	761.81
PZ-24I	764.33	27.63	736.70
PZ-35	743.74	13.22	730.52
PZ-37	760.53	16.46*	744.07
PZ-48	779.88	18.04	761.84

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. Depths to water measured March 25-26, 2019.

* Depth to water recorded from transducer reading on March 25, 12:00 pm.

Atlantic Coast Consulting, Inc.

Table 3C
Summary of Groundwater Elevations
August 2019

Well ID	TOC Elevation (ft MSL)	Depth-to-Water (ft BTOC)	Groundwater Elevation (ft MSL)
YGWA-4I	784.18	23.17	761.01
YGWA-5I	784.53	19.68	764.85
YGWA-5D	784.53	23.32	761.21
YGWA-6S	782.28	19.27	763.01
YGWA-6I	782.58	19.61	762.97
YGWA-17S	783.03	14.63	768.40
YGWA-18S	790.53	21.22	769.31
YGWA-18I	790.56	24.37	766.19
YGWA-20S	767.30	12.46	754.84
YGWA-21I	783.62	27.66*	755.96
YGWC-23S	764.62	16.07*	748.55
YGWC-24S	764.12	28.23	735.89
YGWC-33S	744.54	13.22*	731.32
YGWC-36	739.53	10.00*	729.53
YGWC-38	799.45	28.97*	770.48
YGWA-39	817.99	22.88	795.11
YGWA-40	815.63	26.54	789.09
YGWC-41	803.83	27.20	776.63
YGWC-42	797.75	28.46	769.29
YGWC-43	744.99	15.74	729.25
YGWC-49	782.72	49.53	733.19
YAMW-1	743.76	12.74	731.02
PZ-04S	784.53	24.59	759.94
PZ-05S	784.64	19.69	764.95
PZ-06D	781.93	22.16	759.77
PZ-24I	764.33	29.04	735.29
PZ-35	743.74	12.94	730.80
PZ-37	760.53	16.46*	744.07
PZ-48	779.88	20.23	759.65

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. Depths to water measured August 19-20, 2019.

* Depth to water recorded from transducer reading on August 19, 12:00 pm.

Atlantic Coast Consulting, Inc.

Table 3D
Summary of Groundwater Elevations
September 2019

Well ID	TOC Elevation (ft MSL)	Depth-to-Water (ft BTOC)	Groundwater Elevation (ft MSL)
YGWA-4I	784.18	24.55	759.63
YGWA-5I	784.53	21.05	763.48
YGWA-5D	784.53	24.29	760.24
YGWA-6S	782.28	20.43	761.85
YGWA-6I	782.58	20.76	761.82
YGWA-17S	783.03	15.53	767.50
YGWA-18S	790.53	22.55	767.98
YGWA-18I	790.56	25.50	765.06
YGWA-20S	767.30	12.95	754.35
YGWA-21I	783.62	31.85*	751.77
YGWC-23S	764.62	18.28*	746.34
YGWC-24S	764.12	29.59	734.53
YGWC-33S	744.54	15.02*	729.52
YGWC-36	739.53	10.52*	729.01
YGWC-38	799.45	30.44*	769.01
YGWA-39	817.99	23.46	794.53
YGWA-40	815.63	27.55	788.08
YGWC-41	803.83	28.36	775.47
YGWC-42	797.75	29.56	768.19
YGWC-43	744.99	16.90	728.09
YGWC-49	782.72	31.51	751.21
YAMW-1	743.76	13.03	730.73
PZ-04S	784.53	25.80	758.73
PZ-05S	784.64	21.07	763.57
PZ-06D	781.93	23.17	758.76
PZ-24I	764.33	29.61	734.72
PZ-35	743.74	13.22	730.52
PZ-37	760.53	17.53*	743.00
PZ-48	779.88	21.20	758.68

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. Depths to water measured September 23-24, 2019.

* Depth to water recorded from transducer reading on September 23, 12:00 pm.

Table 3E
Summary of Groundwater Elevations
October 2019

Well ID	TOC Elevation (ft MSL)	Depth-to-Water (ft BTOC)	Groundwater Elevation (ft MSL)
YGWA-4I	784.18	25.03	759.15
YGWA-5I	784.53	21.53	763.00
YGWA-5D	784.53	24.45	760.08
YGWA-6S	782.28	20.86	761.42
YGWA-6I	782.58	21.29	761.29
YGWA-17S	783.03	15.82	767.21
YGWA-18S	790.53	23.04	767.49
YGWA-18I	790.56	25.92	764.64
YGWA-20S	767.30	13.09	754.21
YGWA-21I	783.62	30.02*	753.60
YGWC-23S	764.62	20.14*	744.48
YGWC-24S	764.12	29.00	735.12
YGWC-33S	744.54	16.13*	728.41
YGWC-36	739.53	10.41*	729.12
YGWC-38	799.45	30.71*	768.74
YGWA-39	817.99	23.78	794.21
YGWA-40	815.63	27.95	787.68
YGWC-41	803.83	28.83	775.00
YGWC-42	797.75	29.94	767.81
YGWC-43	744.99	17.17	727.82
YGWC-49	782.72	31.79	750.93
YAMW-1	743.76	13.14	730.62
PZ-04S	784.53	26.36	758.17
PZ-05S	784.64	21.58	763.06
PZ-06D	781.93	23.48	758.45
PZ-24I	764.33	29.78	734.55
PZ-35	743.74	13.30	730.44
PZ-37	760.53	17.34*	743.19
PZ-48	779.88	21.54	758.34

Notes:
1. ft BTOC indicates feet below top of casing.
2. ft MSL indicates feet mean sea level.
3. Depths to water measured October 7-8, 2019.

* Depth to water recorded from transducer reading on October 7, 12:00 pm.

Table 4A
GROUNDWATER FLOW VELOCITY CALCULATIONS
March 2019

Equation

$$v = \frac{K\,(dh/dl)}{P_e}$$

where: v = ground water velocity
K = hydraulic conductivity
dh/dl = hydraulic gradient
P_e = effective porosity

Values Used in Calculation

Value			Source
K_{max} =	3.7E-03	cm/sec	See note 1.
	10	ft/day	
K_{min} =	9.7E-05	cm/sec	
	0.28	ft/day	
i_1 =	0.006	unitless	Hydraulic gradient from YGWA-20S to YGWC-33S
i_2 =	0.034	unitless	YGWA-40 to YGWC-43
i_{avg} =	0.020	unitless	Average
P_e =	0.20	unitless	See note 2.

Minimum Flow Velocity

$$v_{min} = \frac{(0.28)\,(0.02)}{0.20}$$

v_{min} = 0.028 ft/day, or 10.1 ft/year

Maximum Flow Velocity

$$v_{max} = \frac{(10)\,(0.02)}{0.20}$$

v_{max} = 1.04 ft/day, or 380 ft/year

Notes

(1) Slug tests performed by Atlantic Coast Consulting, Inc. (2017)

(2) Default value for silty sands from Interim Final RCRA Investigation (EPA, 1989)

Table 4B
GROUNDWATER FLOW VELOCITY CALCULATIONS
September 2019

Equation

$$v = \frac{K\,(dh/dl)}{P_e}$$

where: v = ground water velocity
K = hydraulic conductivity
dh/dl = hydraulic gradient
P_e = effective porosity

Values Used in Calculation

Value			Source
K_{max} =	3.7E-03	cm/sec	See note 1.
	10	ft/day	
K_{min} =	9.7E-05	cm/sec	
	0.28	ft/day	
i_1 =	0.006	unitless	Hydraulic gradient from YGWA-20S to YGWC-33S
i_2 =	0.034	unitless	YGWA-40 to YGWC-43
i_{avg} =	0.020	unitless	Average
P_e =	0.20	unitless	See note 2.

Minimum Flow Velocity

$$v_{min} = \frac{(0.28)\,(0.02)}{0.20}$$

v_{min} = 0.027 ft/day, or 9.9 ft/year

Maximum Flow Velocity

$$v_{max} = \frac{(10)\,(0.02)}{0.20}$$

v_{max} = 1.03 ft/day, or 375 ft/year

Notes

(1) Slug tests performed by Atlantic Coast Consulting, Inc. (2017)

(2) Default value for silty sands from Interim Final RCRA Investigation (EPA, 1989)

Table 4C
GROUNDWATER FLOW VELOCITY CALCULATIONS
October 2019

Equation

$$v = \frac{K\,(dh/dl)}{P_e}$$

where: v = ground water velocity
K = hydraulic conductivity
dh/dl = hydraulic gradient
P_e = effective porosity

Values Used in Calculation

Value			Source
K_{max} =	3.7E-03	cm/sec	See note 1.
	10	ft/day	
K_{min} =	9.7E-05	cm/sec	
	0.28	ft/day	
i_1 =	0.006	unitless	Hydraulic gradient from YGWA-20S to YGWC-33S
i_2 =	0.034	unitless	YGWA-40 to YGWC-43
i_{avg} =	0.020	unitless	Average
P_e =	0.20	unitless	See note 2.

Minimum Flow Velocity

$$v_{min} = \frac{(0.28)\,(0.02)}{0.20}$$

v_{min} = 0.027 ft/day, or 10.0 ft/year

Maximum Flow Velocity

$$v_{max} = \frac{(10)\,(0.02)}{0.20}$$

v_{max} = 1.03 ft/day, or 376 ft/year

Notes

(1) Slug tests performed by Atlantic Coast Consulting, Inc. (2017)

(2) Default value for silty sands from Interim Final RCRA Investigation (EPA, 1989)

Table 5A
Summary of Groundwater Analytical Data
Early March 2019

Substance		MCL/ (SMCL)	YGWA-4I	YGWA-5I	YGWA-5D	YGWA-17S	YGWA-18S	YGWA-18I	YGWA-20S	YGWA-21I
			3/4/2019	3/4/2019	3/4/2019	3/5/2019	3/5/2019	3/6/2019	3/5/2019	3/5/2019
Appendix IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND (0.0011 J)
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND (0.0013 J)
	Barium	2	0.016	0.019	ND (0.0077 J)	0.015	0.020	0.024	0.016	0.011
	Beryllium	0.004	ND	ND	ND	ND (0.000091 J)	ND (0.000079 J)	ND	ND (0.00011 J)	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0039 J)
	Fluoride	4	ND	ND	ND (0.19 J)	ND	ND	ND	ND	0.32
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.015 J)	ND (0.0032 J)	ND (0.0065 J)	ND	ND (0.0031 J)	ND (0.0033 J)	ND	ND (0.0053 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.21 U	1.00 U	4.43	0.272 U	0.474 U	0.714 U	0.840 U	0.985 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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

Table 5A
Summary of Groundwater Analytical Data
Early March 2019

Substance		MCL/ (SMCL)	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
			3/6/2019	3/5/2019	3/6/2019	3/6/2019
Appendix IV	Antimony	0.006	ND	ND	ND	ND (0.0011 J)
	Arsenic	0.01	ND	ND	ND (0.0022 J)	ND
	Barium	2	0.019	0.019	0.012	0.041
	Beryllium	0.004	ND (0.000066 J)	ND (0.00016 J)	0.023	ND (0.00029 J)
	Cadmium	0.005	ND	ND	0.0030	ND (0.00015 J)
	Chromium	0.1	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	0.028	ND
	Fluoride	4	ND	ND	0.49	ND
	Lead	0.015	ND	ND	ND (0.0012 J)	ND
	Lithium	N/R	ND (0.0025 J)	ND	ND (0.033 J)	ND (0.0057 J)
	Mercury	0.002	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND
	Radium	5	0.736 U	0.837 U	0.970 U	0.919 U
	Selenium	0.05	0.019	ND	0.013	ND (0.0033 J)
	Thallium	0.002	ND	ND	ND (0.00016 J)	ND

Notes:

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

Table 5B
Summary of Groundwater Analytical Data
Late March 2019

Substance		MCL/ (SMCL)	YGWA-39	YGWA-40	YGWC-38	YGWC-41	YGWC-42	YGWC-43
			3/27/2019	3/26/2019	3/27/2019	3/28/2019	3/27/2019	3/28/2019
Appendix III	Boron	N/R	ND (0.017 J)	0.096	16.7	7.1	20.3	1.8
	Calcium	N/R	1.5	5.6	155.0	26.0	109	8.9
	Chloride	(250)	1.4	4.4	6.2	3.2	3.9	1.8
	Fluoride	4	ND	ND	ND (0.24 J)	ND (0.10 J)	ND	ND (0.078 J)
	Sulfate	(250)	17.7	34.3	851	258	831	181
	TDS	(500)	75.0	90.0	1190	372	1100	323

Notes:

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

Table 5C
Summary of Groundwater Analytical Data
April 2019

Substance		MCL/ (SMCL)	YGWA-4I 4/3/2019	YGWA-5I 4/3/2019	YGWA-5D 4/3/2019	YGWA-17S 4/2/2019	YGWA-18S 4/3/2019	YGWA-18I 4/3/2019	YGWA-20S 4/3/2019	YGWA-21I 4/2/2019
Appendix III	Boron	N/R	ND (0.0055 J)	ND (0.0044 J)	ND (0.0076 J)	ND (0.0066 J)	ND (0.0053 J)	ND	ND	ND (0.011 J)
	Calcium	N/R	8.4	2.8	ND (24.7 J)	2.5	1.2	5.3	2.9	8.8
	Chloride	(250)	4.3	4.2	4.0	4.8	6.3	6.9	3.1	2.5
	Fluoride	4	ND	ND	ND (0.047 J)	ND	ND	ND	ND	ND (0.12 J)
	Sulfate	(250)	8.5	2.1	7.0	5.1	1.3	ND (0.82 J)	ND (0.12 J)	3.8
	TDS	(500)	111	83.0	142	72.0	63.0	89.0	57.0	134
Appendix IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND (0.0011 J)
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND (0.00096 J)
	Barium	2	0.017	0.023	ND (0.0087 J)	0.016	0.017	0.025	0.018	0.011
	Beryllium	0.004	ND	ND	ND	ND (0.000090 J)	ND (0.000075 J)	ND	ND (0.000064 J)	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.00083 J)	ND	ND	ND	ND	ND	ND	ND (0.0039 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.014 J)	ND (0.0035 J)	ND (0.0070 J)	ND	ND (0.0028 J)	ND (0.0035 J)	ND	ND (0.0051 J)
	Radium	5	1.07 U	0.430 U	4.79	0.847 U	0.429 U	0.385 U	1.01	1.42
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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

Table 5C
Summary of Groundwater Analytical Data
April 2019

Substance		MCL/ (SMCL)	YGWC-23S 4/4/2019	YGWC-24S 4/4/2019	YGWC-33S 4/4/2019	YGWC-36 4/4/2019
Appendix III	Boron	N/R	0.60	ND	15.4	0.22
	Calcium	N/R	3.7	1.9	163	ND (16.9 J)
	Chloride	(250)	1.7	5.9	5.8	5.4
	Fluoride	4	ND (0.049 J)	ND (0.033 J)	0.57	ND (0.043 J)
	Sulfate	(250)	27.9	ND (0.29 J)	847	119
	TDS	(500)	85.0	63.0	1260	240
Appendix IV	Antimony	0.006	ND	ND	ND	0.0041
	Arsenic	0.01	ND	ND	ND (0.0024 J)	ND
	Barium	2	0.019	0.020	0.014	0.042
	Beryllium	0.004	ND (0.000072 J)	ND (0.00015 J)	0.025	ND (0.00033 J)
	Cadmium	0.005	ND	ND	0.0035	ND (0.00019 J)
	Cobalt	N/R	ND	ND	0.031	ND
	Lead	0.015	ND	ND	ND (0.0014 J)	ND (0.00037 J)
	Lithium	N/R	ND (0.0018 J)	ND	ND (0.035 J)	ND (0.0058 J)
	Radium	5	0.474 U	0.502 U	1.14	1.05 U
	Selenium	0.05	0.017	ND	0.012	ND (0.0029 J)
	Thallium	0.002	ND	ND	ND (0.00018 J)	ND

Notes:

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

Table 5D
Summary of Groundwater Analytical Data
August 2019

Substance		MCL/ (SMCL)	YGWA-39	YGWA-40	YGWC-38	YGWC-41	YGWC-42	YGWC-43
			8/21/2019	8/21/2019	8/22/2019	8/22/2019	8/22/2019	8/21/2019
Appendix IV	**Antimony**	**0.006**	ND	ND	ND	ND	ND	ND
	Arsenic	**0.01**	ND (0.00058 J)	ND	ND (0.00055 J)	ND (0.00036 J)	ND (0.00089 J)	ND
	Barium	**2**	0.015	0.035	0.019	0.021	0.031	0.030
	Beryllium	**0.004**	ND	ND (0.00020 J)	0.0049	ND (0.0026 J)	ND	ND (0.00030 J)
	Cadmium	**0.005**	ND	ND	ND (0.0023 J)	ND (0.00015 J)	ND (0.00017 J)	ND
	Chromium	**0.1**	ND	ND (0.00053 J)	ND	ND	ND	ND (0.00062 J)
	Cobalt	**N/R**	ND (0.00034 J)	ND	ND	ND	ND (0.0019 J)	ND (0.0026 J)
	Fluoride	**4**	ND	ND	ND	ND	ND	ND (0.062 J)
	Lead	**0.015**	ND	ND	ND	ND (0.000067 J)	ND	ND
	Lithium	**N/R**	ND (0.0035 J)	ND	ND (0.0082 J)	ND (0.0035 J)	0.047	ND (0.015 J)
	Mercury	**0.002**	ND	ND	ND	ND	ND	ND
	Molybdenum	**N/R**	ND (0.0021 J)	ND	ND	ND	ND	ND (0.0012 J)
	Radium	**5**	1.01 U	1.24 U	1.97	2.03	1.59	3.16
	Selenium	**0.05**	ND	ND (0.0024 J)	0.14	0.058	0.047	ND
	Thallium	**0.002**	ND	ND	ND	ND	ND	ND

Notes:

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

Table 5E
Summary of Groundwater Analytical Data
September 2019

Substance		MCL/ (SMCL)	YGWA-4I	YGWA-5I	YGWA-5D	YGWA-17S	YGWA-18S	YGWA-18I	YGWA-20S	YGWA-21I
			9/25/2019	9/24/2019	9/24/2019	9/25/2019	9/26/2019	9/26/2019	9/25/2019	9/24/2019
Appendix III	Boron	N/R	ND	ND (0.0049 J)	ND (0.010 J)	ND (0.0081 J)	ND (0.0072 J)	ND (0.0062 J)	ND	ND (0.018 J)
	Calcium	N/R	9.5	2.5	25.8	2.6	1.1	4.9	2.4	7.7
	Chloride	(250)	4.5	4.5	3.7	5.7	7.1	7.0	2.8	3.1
	Fluoride	4	ND	ND	ND (0.050 J)	ND	ND	ND	ND	ND (0.15 J)
	Sulfate	(250)	8.5	2.4	5.5	5.5	1.0	ND (0.64 J)	ND	1.0
	TDS	(500)	117	79.0	129	81.0	72.0	126	75.0	157
Appendix IV	Antimony	0.006	ND	ND	ND	ND	ND	ND (0.00056 J)	ND	0.0035
	Arsenic	0.01	ND	ND	ND (0.00043 J)	ND	ND	ND	ND	ND (0.0026 J)
	Barium	2	0.015	0.019	ND (0.0075 J)	0.015	0.017	0.021	0.014	0.011
	Beryllium	0.004	ND	ND	ND	ND (0.000081 J)	ND (0.000084 J)	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0032 J)
	Lead	0.015	ND	ND (0.000090 J)	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.014 J)	ND (0.0031 J)	ND (0.0065 J)	ND	ND (0.0029 J)	ND (0.0032 J)	ND	ND (0.0068 J)
	Radium	5	1.86	0.699 U	4.06	0.412 U	0.222 U	0.386 U	1.18 U	1.35
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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

Table 5E
Summary of Groundwater Analytical Data
September 2019

Substance		MCL/ (SMCL)	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36	YGWC-49
			9/27/2019	9/26/2019	9/26/2019	9/26/2019	9/26/2019
Appendix III	Boron	N/R	0.58	ND (0.0068 J)	9.6	0.13	ND
	Calcium	N/R	3.7	1.7	117	11.7	12.1
	Chloride	(250)	1.7	6.5	4.5	7.1	5.0
	Fluoride	4	ND (0.12 J)	ND (0.098 J)	0.48	ND (0.094 J)	ND (0.090 J)
	Sulfate	(250)	30.3	ND (0.23 J)	532	84.8	80.0
	TDS	(500)	96.0	81.0	1070	198	192
Appendix IV	Antimony	0.006	ND (0.00029 J)	ND	ND	0.0065	ND
	Arsenic	0.01	ND	ND	ND (0.0025 J)	ND	ND
	Barium	2	0.018	0.017	0.010	0.025	0.065
	Beryllium	0.004	ND (0.000077 J)	ND (0.00014 J)	0.019	ND (0.00029 J)	ND (0.00013 J)
	Cadmium	0.005	ND	ND	ND (0.0023 J)	ND (0.00017 J)	ND
	Cobalt	N/R	ND	ND	0.023	ND (0.00048 J)	ND
	Lead	0.015	ND (0.00013 J)	ND	ND (0.00087 J)	ND (0.00023 J)	ND
	Lithium	N/R	ND (0.0017 J)	ND	ND (0.028 J)	ND (0.0041 J)	ND (0.0036 J)
	Radium	5	0.684 U	0.964 U	1.08 U	0.979 U	1.16 U
	Selenium	0.05	0.018	ND	0.011	ND (0.0019 J)	ND (0.0077 J)
	Thallium	0.002	ND	ND	ND (0.00014 J)	ND	ND

Notes:

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

Table 5F
Summary of Groundwater Analytical Data
October 2019

Substance		MCL/ (SMCL)	YGWA-39	YGWA-40	YGWC-38	YGWC-41	YGWC-42	YGWC-43
			10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019
Appendix III	Boron	N/R	ND (0.017 J)	0.079	13.5	8.6	16.6	2.7
	Calcium	N/R	2.4	4.9	133	27.6	92.0	18.2
	Chloride	(250)	2.1	5.1	5.0	3.3	4.1	2.3
	Fluoride	4	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	15.0	27.9	708	263	725	279
	TDS	(500)	119	98.0	1100	440	1170	501
Appendix IV	Arsenic	0.01	ND (0.00063 J)	ND	ND (0.00057 J)	ND (0.00052 J)	ND (0.00078 J)	ND (0.00051 J)
	Barium	2	0.013	0.036	0.019	0.021	0.027	0.040
	Beryllium	0.004	ND	ND (0.00020 J)	0.0046	ND (0.0026 J)	ND	ND (0.00034 J)
	Cadmium	0.005	ND	ND	ND (0.0021 J)	ND (0.00017 J)	ND (0.00025 J)	ND
	Chromium	0.1	ND	ND (0.0012 J)	ND	ND	ND (0.00043 J)	ND (0.00074 J)
	Cobalt	N/R	ND	ND	ND	ND	ND (0.0019 J)	ND (0.0023 J)
	Lead	0.015	ND	ND	ND	ND (0.00012 J)	ND	ND
	Lithium	N/R	ND (0.0036 J)	ND	ND (0.0081 J)	ND (0.0032 J)	0.037	ND (0.018 J)
	Molybdenum	N/R	ND (0.0018 J)	ND	ND	ND	ND	ND (0.0012 J)
	Radium	5	1.02 U	0.866 U	0.751 U	0.609 U	0.995 U	3.65
	Selenium	0.05	ND	ND (0.0026 J)	0.12	0.052	0.042	ND

Notes:

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

Table 6
Statistical Method Summary

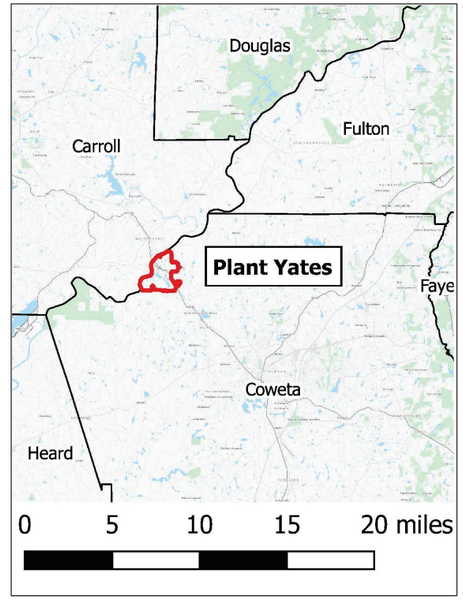
Plant Yates AP-3, A, B, and B' / R6 CCR Landfill Statistical Method Summary		
Monitoring Well Network	Upgradient Wells	YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWA-39 and YGWA-40
	Downgradient Wells	YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, YGWC-38, YGWC-41, YGWC-42, YGWC-43 and YGWC-49
CCR Monitoring Parameters	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
Statistical Methodology	Data Screening Proposed Background	Evaluate outliers, trends, and seasonality when sufficient data are available
	Statistical Limits	Interwell statistical limits

Table 7
Summary of Background Levels and Groundwater Protection Standards

Constituent	Units	Site Background	Federal GWPS	State GWPS
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.010	0.010
Barium	mg/L	0.041	2	2
Beryllium	mg/L	0.003	0.004	0.004
Cadmium	mg/L	0.0001	0.005	0.005
Chromium	Mg/L	0.010	0.10	0.10
Cobalt	mg/L	0.013	0.013	0.013
Fluoride	mg/L	0.3	4	4
Lead	mg/L	0.005	0.015	0.015
Lithium	mg/L	0.025	0.040	0.025
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.010	0.100	0.010
Radium	pCi/L	6.92	6.92	6.92
Selenium	mg/L	0.010	0.050	0.050
Thallium	mg/L	0.001	0.002	0.002

Notes:
1. Site Background = Parametric tolerance limits calculated from pooled upgradient well data.
2. Federal GWPS = Groundwater protection standard, per 257.95(h)(1-3).
3. State GWPS = Groundwater protection standard, per Georgia EPD Rule 391-3-4-.10(6)(a).
4. Units are milligrams per liter (mg/L), except for radium, which are picocuries per liter (pCi/L).

FIGURES



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PROJECT:

PLANT YATES

708 DYER ROAD
NEWNAN, GEORGIA

REVISIONS

Drawn by: MM

Checked by: EP

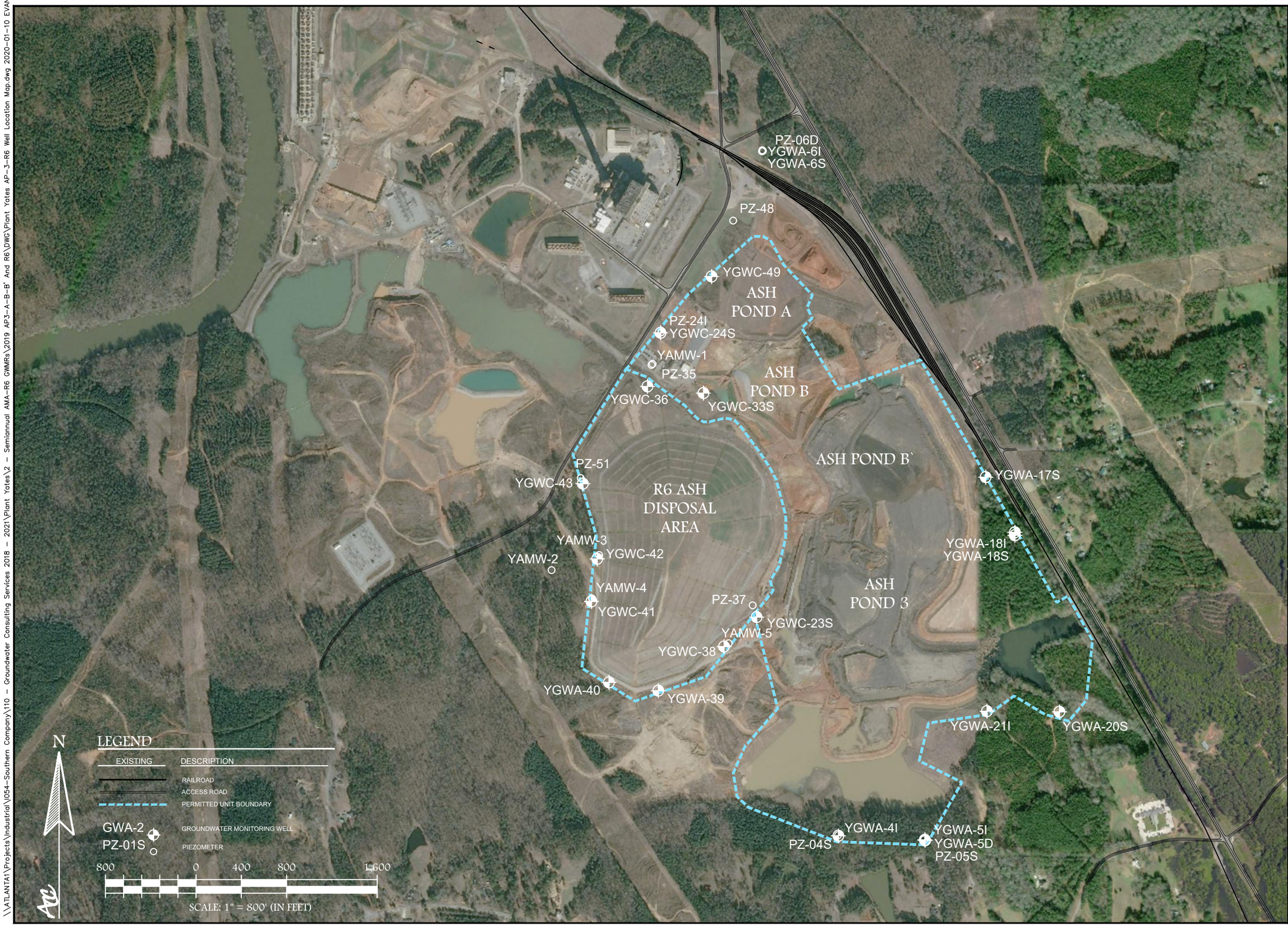
PROJECT NUMBER:

I054-110

July 2019

SITE LOCATION MAP

FIGURE 1



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November 2019

WELL LOCATION MAP

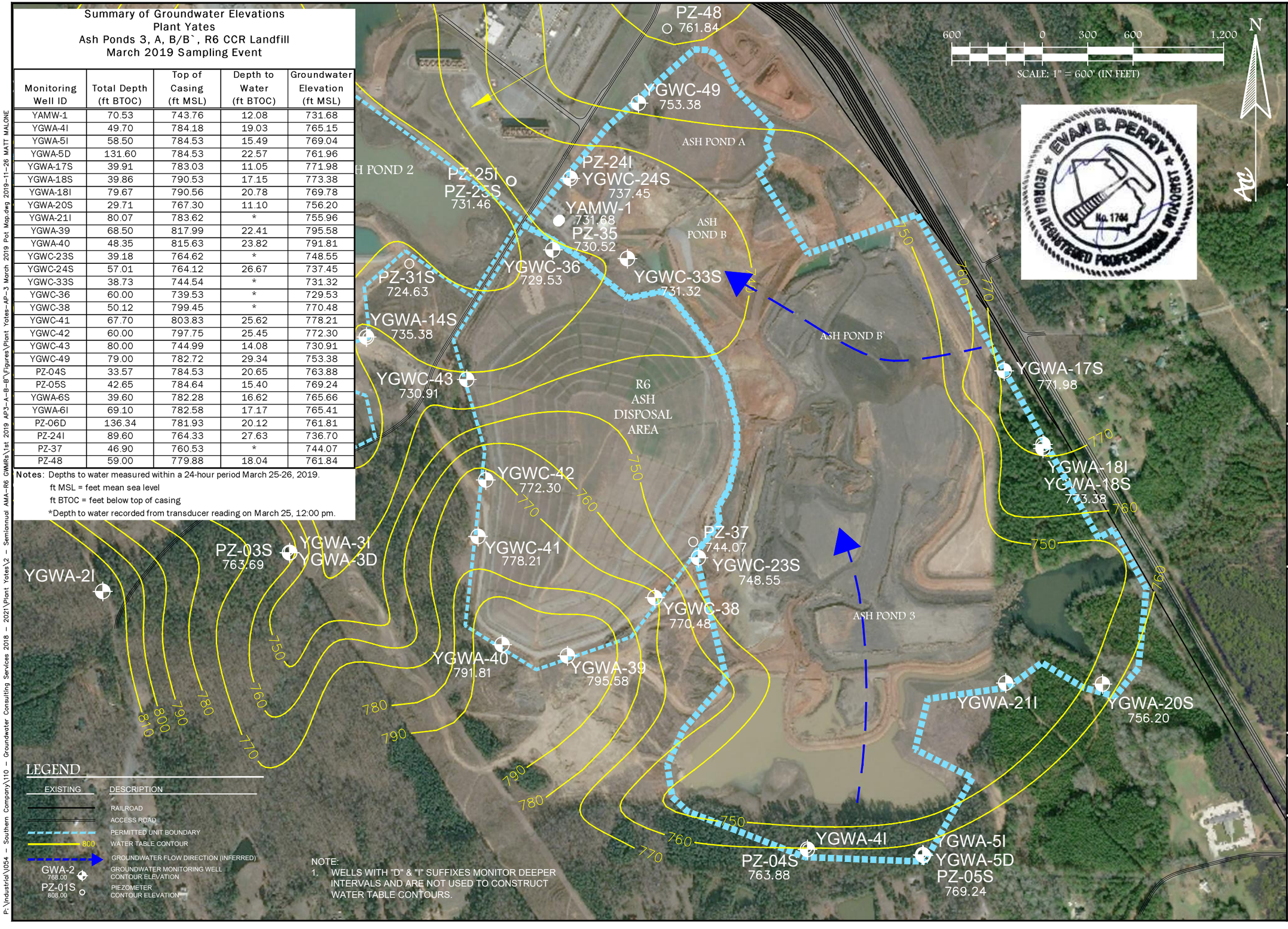
FIGURE 2

\\ATLANTA1\Projects\Industrial\I054-Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Plant Yates\2 - Semiannual AMA-R6 GWMRs\2019 AP3-A-B-B' And R6\DWG\Plant Yates AP-3-R6 Well Location Map.dwg 2020-01-10 EVAN PERRY

Summary of Groundwater Elevations
Plant Yates
Ash Ponds 3, A, B/B`, R6 CCR Landfill
March 2019 Sampling Event

Monitoring Well ID	Total Depth (ft BTOC)	Top of Casing (ft MSL)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
YAMW-1	70.53	743.76	12.08	731.68
YGWA-4I	49.70	784.18	19.03	765.15
YGWA-5I	58.50	784.53	15.49	769.04
YGWA-5D	131.60	784.53	22.57	761.96
YGWA-17S	39.91	783.03	11.05	771.98
YGWA-18S	39.86	790.53	17.15	773.38
YGWA-18I	79.67	790.56	20.78	769.78
YGWA-20S	29.71	767.30	11.10	756.20
YGWA-21I	80.07	783.62	*	755.96
YGWA-39	68.50	817.99	22.41	795.58
YGWA-40	48.35	815.63	23.82	791.81
YGWC-23S	39.18	764.62	*	748.55
YGWC-24S	57.01	764.12	26.67	737.45
YGWC-33S	38.73	744.54	*	731.32
YGWC-36	60.00	739.53	*	729.53
YGWC-38	50.12	799.45	*	770.48
YGWC-41	67.70	803.83	25.62	778.21
YGWC-42	60.00	797.75	25.45	772.30
YGWC-43	80.00	744.99	14.08	730.91
YGWC-49	79.00	782.72	29.34	753.38
PZ-04S	33.57	784.53	20.65	763.88
PZ-05S	42.65	784.64	15.40	769.24
YGWA-6S	39.60	782.28	16.62	765.66
YGWA-6I	69.10	782.58	17.17	765.41
PZ-06D	136.34	781.93	20.12	761.81
PZ-24I	89.60	764.33	27.63	736.70
PZ-37	46.90	760.53	*	744.07
PZ-48	59.00	779.88	18.04	761.84

Notes: Depths to water measured within a 24-hour period March 25-26, 2019.
ft MSL = feet mean sea level
ft BTOC = feet below top of casing
*Depth to water recorded from transducer reading on March 25, 12:00 pm.



LEGEND

EXISTING	DESCRIPTION
	RAILROAD
	ACCESS ROAD
	PERMITTED UNIT BOUNDARY
800	WATER TABLE CONTOUR
	GROUNDWATER FLOW DIRECTION (INFERRED)
GWA-2 768.00	GROUNDWATER MONITORING WELL CONTOUR ELEVATION
PZ-01S 808.00	PIEZOMETER CONTOUR ELEVATION

NOTE:
1. WELLS WITH "D" & "I" SUFFIXES MONITOR DEEPER INTERVALS AND ARE NOT USED TO CONSTRUCT WATER TABLE CONTOURS.

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PROJECT:
PLANT YATES

708 DYER ROAD
NEWNAN, GEORGIA

REVISIONS

Drawn by: MM
Checked by: EP

PROJECT NUMBER:
1054-110
July 2019

MARCH 2019
WATER TABLE
CONTOUR MAP

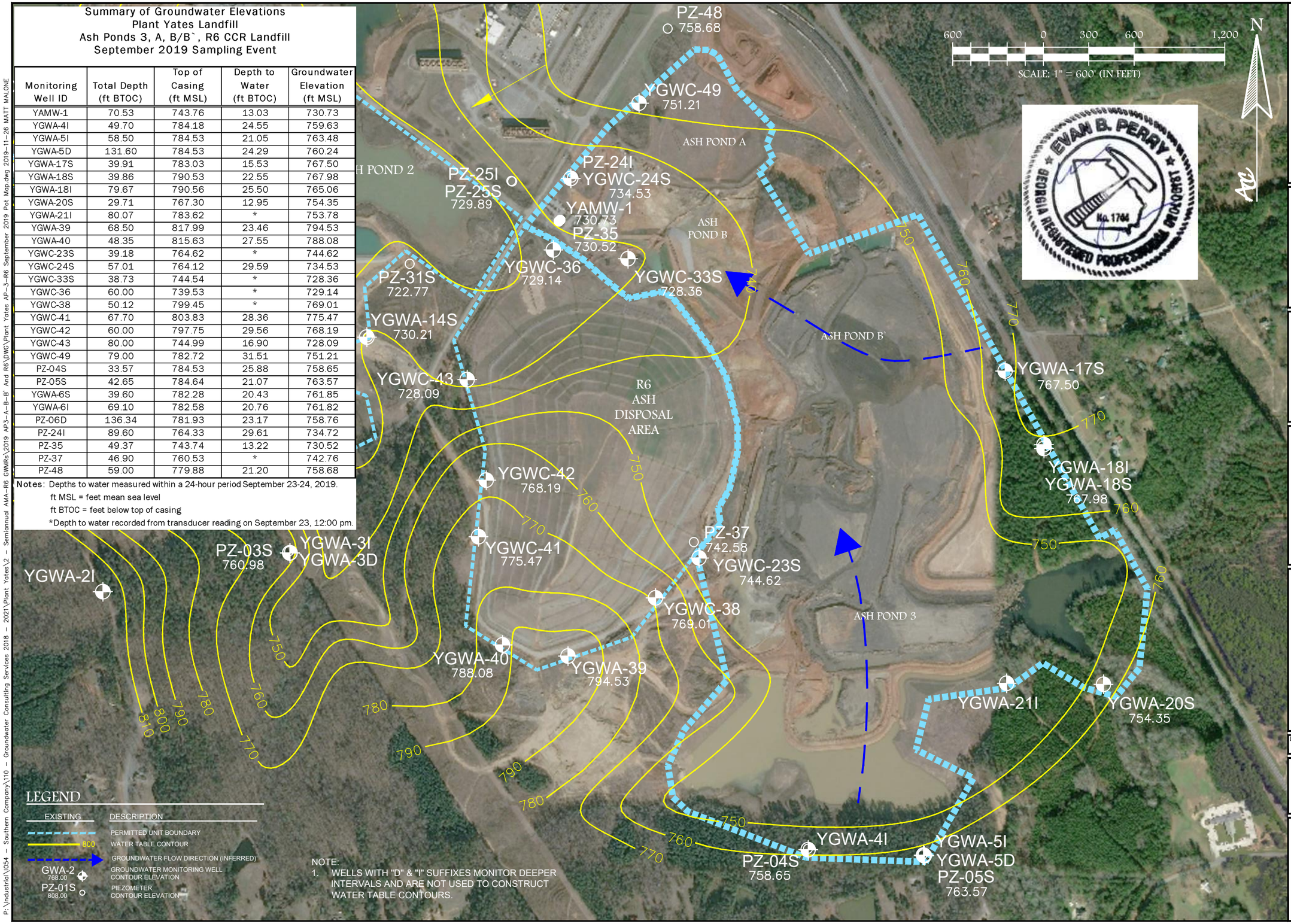
FIGURE 3

P:\Industrial\1054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Plant Yates\2 - Semiannual AMA-R6 GWRs\1st 2019 AP3-A-B-B'\Figures\Plant Yates-AP-3 March 2019 Pot Map.dwg 2019-11-26 MATT MALONE

Summary of Groundwater Elevations
Plant Yates Landfill
Ash Ponds 3, A, B/B`, R6 CCR Landfill
September 2019 Sampling Event

Monitoring Well ID	Total Depth (ft BTOC)	Top of Casing (ft MSL)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
YAMW-1	70.53	743.76	13.03	730.73
YGWA-4I	49.70	784.18	24.55	759.63
YGWA-5I	58.50	784.53	21.05	763.48
YGWA-5D	131.60	784.53	24.29	760.24
YGWA-17S	39.91	783.03	15.53	767.50
YGWA-18S	39.86	790.53	22.55	767.98
YGWA-18I	79.67	790.56	25.50	765.06
YGWA-20S	29.71	767.30	12.95	754.35
YGWA-21I	80.07	783.62	*	753.78
YGWA-39	68.50	817.99	23.46	794.53
YGWA-40	48.35	815.63	27.55	788.08
YGWC-23S	39.18	764.62	*	744.62
YGWC-24S	57.01	764.12	29.59	734.53
YGWC-33S	38.73	744.54	*	728.36
YGWC-36	60.00	739.53	*	729.14
YGWC-38	50.12	799.45	*	769.01
YGWC-41	67.70	803.83	28.36	775.47
YGWC-42	60.00	797.75	29.56	768.19
YGWC-43	80.00	744.99	16.90	728.09
YGWC-49	79.00	782.72	31.51	751.21
PZ-04S	33.57	784.53	25.88	758.65
PZ-05S	42.65	784.64	21.07	763.57
YGWA-6S	39.60	782.28	20.43	761.85
YGWA-6I	69.10	782.58	20.76	761.82
PZ-06D	136.34	781.93	23.17	758.76
PZ-24I	89.60	764.33	29.61	734.72
PZ-35	49.37	743.74	13.22	730.52
PZ-37	46.90	760.53	*	742.76
PZ-48	59.00	779.88	21.20	758.68

Notes: Depths to water measured within a 24-hour period September 23-24, 2019.
ft MSL = feet mean sea level
ft BTOC = feet below top of casing
*Depth to water recorded from transducer reading on September 23, 12:00 pm.



LEGEND

EXISTING	DESCRIPTION
	PERMITTED UNIT BOUNDARY
800	WATER TABLE CONTOUR
	GROUNDWATER FLOW DIRECTION (INFERRED)
GWA-2 768.00	GROUNDWATER MONITORING WELL CONTOUR ELEVATION
PZ-01S 808.00	PIEZOMETER CONTOUR ELEVATION

NOTE:
1. WELLS WITH "D" & "I" SUFFIXES MONITOR DEEPER INTERVALS AND ARE NOT USED TO CONSTRUCT WATER TABLE CONTOURS.

ATLANTIC COAST CONSULTING, INC.
1150 Northmeadow Pkwy.
Suite 100
Roswell, GA 30076
770.594.5998
www.atlcc.net

EVAN B. PERRY
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 1744

PROJECT:
PLANT YATES

708 DYER ROAD
NEWNAN, GEORGIA

REVISIONS

Drawn by: MM
Checked by: EP

PROJECT NUMBER:
1054-110
October 2019

SEPTEMBER 2019
WATER TABLE
CONTOUR MAP

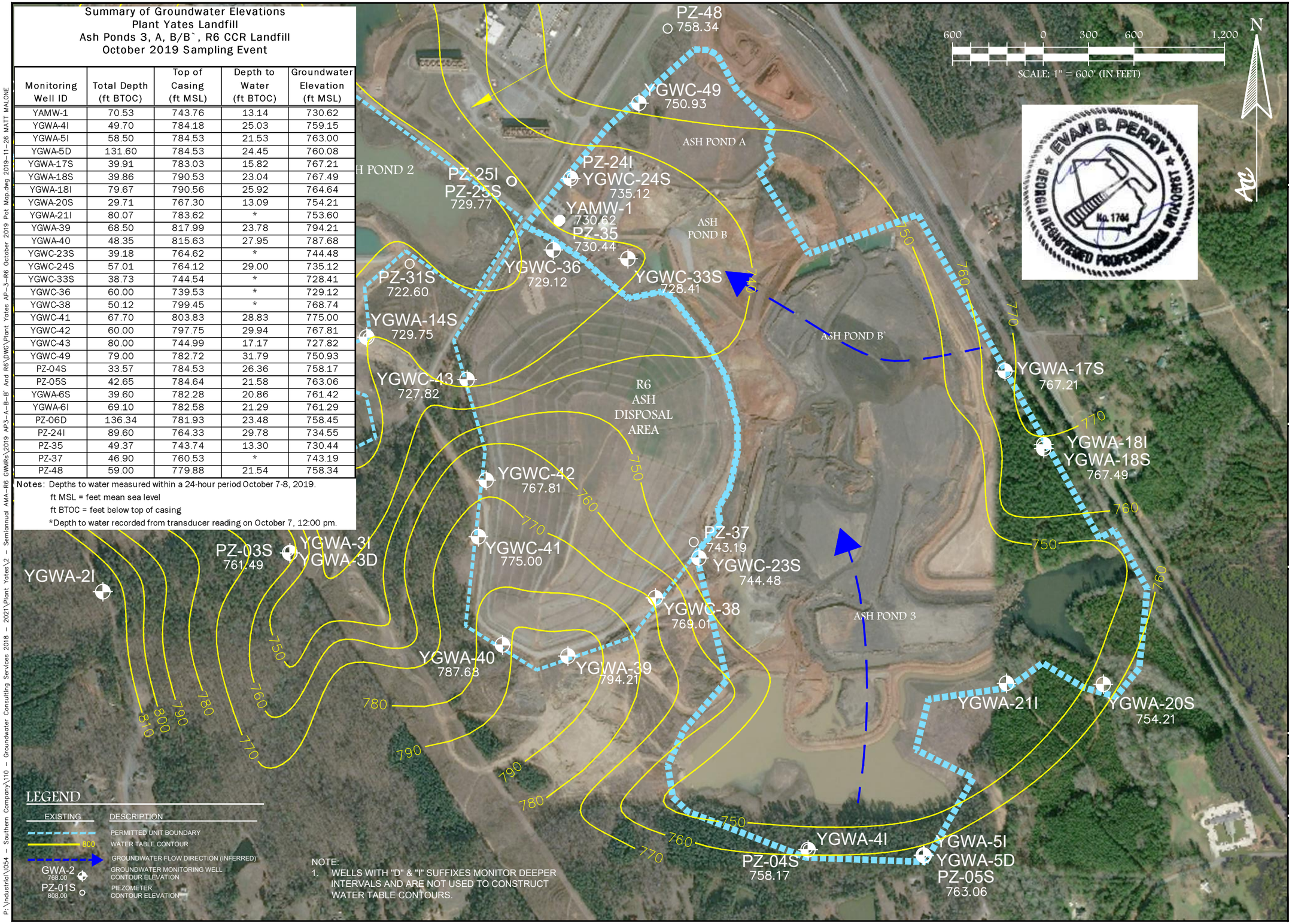
FIGURE 4

P:\Industrial\054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Plant Yates\2 - Semiannual AMA-R6 GMMRs\2019 AP3-A-B-B' And R6\DWG\Plant Yates AP-3-R6 September 2019 Pot Map.dwg 2019-11-26 MATT MALONE

Summary of Groundwater Elevations
Plant Yates Landfill
Ash Ponds 3, A, B/B`, R6 CCR Landfill
October 2019 Sampling Event

Monitoring Well ID	Total Depth (ft BTOC)	Top of Casing (ft MSL)	Depth to Water (ft BTOC)	Groundwater Elevation (ft MSL)
YAMW-1	70.53	743.76	13.14	730.62
YGWA-4I	49.70	784.18	25.03	759.15
YGWA-5I	58.50	784.53	21.53	763.00
YGWA-5D	131.60	784.53	24.45	760.08
YGWA-17S	39.91	783.03	15.82	767.21
YGWA-18S	39.86	790.53	23.04	767.49
YGWA-18I	79.67	790.56	25.92	764.64
YGWA-20S	29.71	767.30	13.09	754.21
YGWA-21I	80.07	783.62	*	753.60
YGWA-39	68.50	817.99	23.78	794.21
YGWA-40	48.35	815.63	27.95	787.68
YGWC-23S	39.18	764.62	*	744.48
YGWC-24S	57.01	764.12	29.00	735.12
YGWC-33S	38.73	744.54	*	728.41
YGWC-36	60.00	739.53	*	729.12
YGWC-38	50.12	799.45	*	768.74
YGWC-41	67.70	803.83	28.83	775.00
YGWC-42	60.00	797.75	29.94	767.81
YGWC-43	80.00	744.99	17.17	727.82
YGWC-49	79.00	782.72	31.79	750.93
PZ-04S	33.57	784.53	26.36	758.17
PZ-05S	42.65	784.64	21.58	763.06
YGWA-6S	39.60	782.28	20.86	761.42
YGWA-6I	69.10	782.58	21.29	761.29
PZ-06D	136.34	781.93	23.48	758.45
PZ-24I	89.60	764.33	29.78	734.55
PZ-35	49.37	743.74	13.30	730.44
PZ-37	46.90	760.53	*	743.19
PZ-48	59.00	779.88	21.54	758.34

Notes: Depths to water measured within a 24-hour period October 7-8, 2019.
ft MSL = feet mean sea level
ft BTOC = feet below top of casing
*Depth to water recorded from transducer reading on October 7, 12:00 pm.



LEGEND

EXISTING	DESCRIPTION
	PERMITTED UNIT BOUNDARY
800	WATER TABLE CONTOUR
	GROUNDWATER FLOW DIRECTION (INFERRED)
GWA-2 768.00	GROUNDWATER MONITORING WELL CONTOUR ELEVATION
PZ-01S 808.00	PIEZOMETER CONTOUR ELEVATION

NOTE:
1. WELLS WITH "D" & "I" SUFFIXES MONITOR DEEPER INTERVALS AND ARE NOT USED TO CONSTRUCT WATER TABLE CONTOURS.

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EVAN B. PERRY
GEORGIA REGISTERED PROFESSIONAL GEOLOGIST
No. 1744

PROJECT:
PLANT YATES

708 DYER ROAD
NEWNAN, GEORGIA

REVISIONS

Drawn by: MM
Checked by: EP

PROJECT NUMBER:
1054-110
November 2019

OCTOBER 2019
WATER TABLE
CONTOUR MAP

FIGURE 5

P:\Industrial\1054 - Southern Company\110 - Groundwater Consulting Services 2018 - 2021\Plant Yates\2 - Semiannual AMA-R6 GWMRs\2019 AP3-A-B-B' And R6\DWG\Plant Yates AP-3-R6 October 2019 Pot Map.dwg 2019-11-26 MATT MALONE

APPENDICES

APPENDIX A

LABORATORY ANALYTICAL AND FIELD SAMPLING REPORTS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 04, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 3/13/2019. The report has been revised to correct a sample ID per consultant request. No other changes have been made to this report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2615736001	**YGWA-4I**	Water	03/04/19 14:35	03/06/19 16:13
2615736002	**YGWA-5I**	Water	03/04/19 13:17	03/06/19 16:13
2615736003	**YGWA-5D**	Water	03/04/19 12:03	03/06/19 16:13
2615736004	**YGWA-17S**	Water	03/05/19 11:38	03/06/19 16:13
2615736005	**YGWA-18S**	Water	03/05/19 16:53	03/06/19 16:13
2615736006	**YGWA-18I**	Water	03/06/19 11:25	03/06/19 16:13
2615736007	**YGWA-20S**	Water	03/05/19 13:40	03/06/19 16:13
2615736008	**YGWA-21I**	Water	03/05/19 12:05	03/06/19 16:13
2615736009	**YGWC-23S**	Water	03/06/19 13:15	03/06/19 16:13
2615736010	**YGWC-24S**	Water	03/05/19 14:55	03/06/19 16:13
2615736011	**YGWC-33S**	Water	03/06/19 13:00	03/06/19 16:13
2615736012	**YGWC-36**	Water	03/06/19 11:30	03/06/19 16:13
2615736013	**EB-3-3-5-19**	Water	03/05/19 11:00	03/06/19 16:13
2615736014	**EB-4-3-6-19**	Water	03/06/19 10:45	03/06/19 16:13
2615736015	**DUP-3**	Water	03/06/19 00:00	03/06/19 16:13
2615736016	**DUP-4**	Water	03/06/19 00:00	03/06/19 16:13
2615736017	**FB-3-3-5-19**	Water	03/05/19 13:30	03/06/19 16:13
2615736018	**FB-4-3-6-19**	Water	03/06/19 13:45	03/06/19 16:13

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2615736001	YGWA-4I	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736002	YGWA-5I	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736003	YGWA-5D	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736004	YGWA-17S	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736005	YGWA-18S	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736006	YGWA-18I	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736007	YGWA-20S	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736008	YGWA-21I	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736009	YGWC-23S	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736010	YGWC-24S	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736011	YGWC-33S	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736012	YGWC-36	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736013	EB-3-3-5-19	EPA 6020B	CSW	12

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SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736014	**EB-4-3-6-19**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736015	**DUP-3**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736016	**DUP-4**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736017	**FB-3-3-5-19**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1
2615736018	**FB-4-3-6-19**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	RLC	1

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-4I **Lab ID: 2615736001** Collected: 03/04/19 14:35 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 18:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 18:46	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 18:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 18:46	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 18:46	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 18:46	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 18:46	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 18:46	7439-92-1	
Lithium	**0.015J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 18:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 18:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 18:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 18:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 14:30	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 08:17	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-5I **Lab ID: 2615736002** Collected: 03/04/19 13:17 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 18:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 18:52	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 18:52	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 18:52	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 18:52	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 18:52	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 18:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 18:52	7439-92-1	
Lithium	**0.0032J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 18:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 18:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 18:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 18:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 14:44	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 09:27	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-5D **Lab ID: 2615736003** Collected: 03/04/19 12:03 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 18:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 18:58	7440-38-2	
Barium	**0.0077J**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 18:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 18:58	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 18:58	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 18:58	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 18:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 18:58	7439-92-1	
Lithium	**0.0065J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 18:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 18:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 18:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 18:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 14:51	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.19J**	mg/L	0.30	0.029	1		03/09/19 09:50	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-17S **Lab ID: 2615736004** Collected: 03/05/19 11:38 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:03	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:03	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:03	7440-39-3	
Beryllium	**0.000091J**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:03	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:03	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:03	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:03	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:03	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:03	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:03	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:03	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 14:53	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 10:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-18S **Lab ID: 2615736005** Collected: 03/05/19 16:53 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:09	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:09	7440-39-3	
Beryllium	**0.000079J**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:09	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:09	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:09	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:09	7439-92-1	
Lithium	**0.0031J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:09	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 14:56	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 10:37	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-18I **Lab ID: 2615736006** Collected: 03/06/19 11:25 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:15	7440-38-2	
Barium	**0.024**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:15	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:15	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:15	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:15	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:15	7439-92-1	
Lithium	**0.0033J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:15	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 14:58	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 11:00	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-20S **Lab ID: 2615736007** Collected: 03/05/19 13:40 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:20	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:20	7440-39-3	
Beryllium	**0.00011J**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:20	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:20	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:20	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:20	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:01	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 11:23	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWA-21I **Lab ID: 2615736008** Collected: 03/05/19 12:05 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0011J**	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:26	7440-36-0	
Arsenic	**0.0013J**	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:26	7440-38-2	
Barium	**0.011**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:26	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:26	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:26	7440-47-3	
Cobalt	**0.0039J**	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:26	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:26	7439-92-1	
Lithium	**0.0053J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:03	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.32**	mg/L	0.30	0.029	1		03/09/19 11:46	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWC-23S **Lab ID: 2615736009** Collected: 03/06/19 13:15 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:43	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:43	7440-39-3	
Beryllium	**0.000066J**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:43	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:43	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:43	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:43	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:43	7439-92-1	
Lithium	**0.0025J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:43	7439-98-7	
Selenium	**0.019**	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:05	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 13:42	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWC-24S **Lab ID: 2615736010** Collected: 03/05/19 14:55 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:49	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:49	7440-39-3	
Beryllium	**0.00016J**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:49	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:49	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:49	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:49	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:49	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:49	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:49	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:08	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 14:06	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWC-33S **Lab ID: 2615736011** Collected: 03/06/19 13:00 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 19:55	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 19:55	7440-38-2	
Barium	**0.012**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 19:55	7440-39-3	
Beryllium	**0.023**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 19:55	7440-41-7	
Cadmium	**0.0030**	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 19:55	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 19:55	7440-47-3	
Cobalt	**0.028**	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 19:55	7440-48-4	
Lead	**0.0012J**	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 19:55	7439-92-1	
Lithium	**0.033J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 19:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 19:55	7439-98-7	
Selenium	**0.013**	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 19:55	7782-49-2	
Thallium	**0.00016J**	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 19:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:10	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.49**	mg/L	0.30	0.029	1		03/09/19 14:52	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: YGWC-36 **Lab ID: 2615736012** Collected: 03/06/19 11:30 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0011J**	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 20:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 20:18	7440-38-2	
Barium	**0.041**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 20:18	7440-39-3	
Beryllium	**0.00029J**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 20:18	7440-41-7	
Cadmium	**0.00015J**	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 20:18	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 20:18	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 20:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 20:18	7439-92-1	
Lithium	**0.0057J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 20:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 20:18	7439-98-7	
Selenium	**0.0033J**	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 20:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 20:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:12	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 15:15	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: EB-3-3-5-19 **Lab ID: 2615736013** Collected: 03/05/19 11:00 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 20:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 20:23	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 20:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 20:23	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 20:23	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 20:23	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 20:23	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 20:23	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 20:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 20:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 20:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 20:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:20	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 15:38	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: EB-4-3-6-19 **Lab ID: 2615736014** Collected: 03/06/19 10:45 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 20:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 20:29	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 20:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 20:29	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 20:29	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 20:29	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 20:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 20:29	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 20:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 20:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 20:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 20:29	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:22	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 16:02	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: DUP-3 **Lab ID: 2615736015** Collected: 03/06/19 00:00 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 20:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 20:35	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 20:35	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 20:35	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 20:35	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 20:35	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 20:35	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 20:35	7439-92-1	
Lithium	**0.0032J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 20:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 20:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 20:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 20:35	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:24	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 16:25	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: DUP-4 **Lab ID: 2615736016** Collected: 03/06/19 00:00 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 20:52	7440-36-0	
Arsenic	**0.0023J**	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 20:52	7440-38-2	
Barium	**0.012**	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 20:52	7440-39-3	
Beryllium	**0.024**	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 20:52	7440-41-7	
Cadmium	**0.0030**	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 20:52	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 20:52	7440-47-3	
Cobalt	**0.029**	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 20:52	7440-48-4	
Lead	**0.0013J**	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 20:52	7439-92-1	
Lithium	**0.035J**	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 20:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 20:52	7439-98-7	
Selenium	**0.014**	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 20:52	7782-49-2	
Thallium	**0.00016J**	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 20:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:27	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.40**	mg/L	0.30	0.029	1		03/09/19 16:48	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: FB-3-3-5-19 **Lab ID: 2615736017** Collected: 03/05/19 13:30 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 20:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 20:58	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 20:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 20:58	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 20:58	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 20:58	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 20:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 20:58	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 20:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 20:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 20:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 20:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:29	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 17:12	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Sample: FB-4-3-6-19 **Lab ID: 2615736018** Collected: 03/06/19 13:45 Received: 03/06/19 16:13 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	03/08/19 12:18	03/08/19 21:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	03/08/19 12:18	03/08/19 21:04	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	03/08/19 12:18	03/08/19 21:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	03/08/19 12:18	03/08/19 21:04	7440-41-7	
Cadmium	ND	mg/L	0.0010	0.000093	1	03/08/19 12:18	03/08/19 21:04	7440-43-9	
Chromium	ND	mg/L	0.010	0.0016	1	03/08/19 12:18	03/08/19 21:04	7440-47-3	
Cobalt	ND	mg/L	0.010	0.00052	1	03/08/19 12:18	03/08/19 21:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	03/08/19 12:18	03/08/19 21:04	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	03/08/19 12:18	03/08/19 21:04	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.0019	1	03/08/19 12:18	03/08/19 21:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0014	1	03/08/19 12:18	03/08/19 21:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/08/19 12:18	03/08/19 21:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.000036	1	03/08/19 08:56	03/08/19 15:31	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		03/09/19 19:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

QC Batch: 23871 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2615736001, 2615736002, 2615736003, 2615736004, 2615736005, 2615736006, 2615736007, 2615736008, 2615736009, 2615736010, 2615736011, 2615736012, 2615736013, 2615736014, 2615736015, 2615736016, 2615736017, 2615736018

METHOD BLANK: 107019 Matrix: Water
Associated Lab Samples: 2615736001, 2615736002, 2615736003, 2615736004, 2615736005, 2615736006, 2615736007, 2615736008, 2615736009, 2615736010, 2615736011, 2615736012, 2615736013, 2615736014, 2615736015, 2615736016, 2615736017, 2615736018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000036	03/08/19 14:25	

LABORATORY CONTROL SAMPLE: 107020

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 107021 107022

Parameter	Units	2615736001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0025	98	100	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

QC Batch: 23903 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2615736001, 2615736002, 2615736003, 2615736004, 2615736005, 2615736006, 2615736007, 2615736008, 2615736009, 2615736010, 2615736011, 2615736012, 2615736013, 2615736014, 2615736015, 2615736016, 2615736017, 2615736018

METHOD BLANK: 107116 Matrix: Water
Associated Lab Samples: 2615736001, 2615736002, 2615736003, 2615736004, 2615736005, 2615736006, 2615736007, 2615736008, 2615736009, 2615736010, 2615736011, 2615736012, 2615736013, 2615736014, 2615736015, 2615736016, 2615736017, 2615736018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	03/08/19 18:35	
Arsenic	mg/L	ND	0.0050	0.00057	03/08/19 18:35	
Barium	mg/L	ND	0.010	0.00078	03/08/19 18:35	
Beryllium	mg/L	ND	0.0030	0.000050	03/08/19 18:35	
Cadmium	mg/L	ND	0.0010	0.000093	03/08/19 18:35	
Chromium	mg/L	ND	0.010	0.0016	03/08/19 18:35	
Cobalt	mg/L	ND	0.010	0.00052	03/08/19 18:35	
Lead	mg/L	ND	0.0050	0.00027	03/08/19 18:35	
Lithium	mg/L	ND	0.050	0.00097	03/08/19 18:35	
Molybdenum	mg/L	ND	0.010	0.0019	03/08/19 18:35	
Selenium	mg/L	ND	0.010	0.0014	03/08/19 18:35	
Thallium	mg/L	ND	0.0010	0.00014	03/08/19 18:35	

LABORATORY CONTROL SAMPLE: 107117

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.098	98	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.092	92	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.095	95	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.091	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 107118 107119

Parameter	Units	2615736011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	2	20	
Arsenic	mg/L	0.0022J	0.1	0.1	0.10	0.10	101	100	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 107118 107119

Parameter	Units	2615736011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.012	0.1	0.1	0.11	0.11	99	97	75-125	2	20	
Beryllium	mg/L	0.023	0.1	0.1	0.11	0.11	84	82	75-125	2	20	
Cadmium	mg/L	0.0030	0.1	0.1	0.10	0.10	97	98	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.098	0.097	97	96	75-125	0	20	
Cobalt	mg/L	0.028	0.1	0.1	0.12	0.12	91	94	75-125	2	20	
Lead	mg/L	0.0012J	0.1	0.1	0.080	0.081	79	79	75-125	1	20	
Lithium	mg/L	0.033J	0.1	0.1	0.12	0.12	87	86	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Selenium	mg/L	0.013	0.1	0.1	0.12	0.11	103	102	75-125	0	20	
Thallium	mg/L	0.00016J	0.1	0.1	0.081	0.080	81	80	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

QC Batch: 23825 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2615736001, 2615736002, 2615736003, 2615736004, 2615736005, 2615736006, 2615736007, 2615736008, 2615736009, 2615736010, 2615736011, 2615736012, 2615736013, 2615736014, 2615736015, 2615736016, 2615736017, 2615736018

METHOD BLANK: 106700 Matrix: Water
Associated Lab Samples: 2615736001, 2615736002, 2615736003, 2615736004, 2615736005, 2615736006, 2615736007, 2615736008, 2615736009, 2615736010, 2615736011, 2615736012, 2615736013, 2615736014, 2615736015, 2615736016, 2615736017, 2615736018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	03/09/19 07:31	

LABORATORY CONTROL SAMPLE: 106701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106702 106703

Parameter	Units	2615736001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	10.0	10.1	100	101	90-110	0	15	

MATRIX SPIKE SAMPLE: 106704

Parameter	Units	2615736002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	10.4	104	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALIFIERS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2615736001	YGWA-4I	EPA 3005A	23903	EPA 6020B	23932
2615736002	YGWA-5I	EPA 3005A	23903	EPA 6020B	23932
2615736003	YGWA-5D	EPA 3005A	23903	EPA 6020B	23932
2615736004	YGWA-17S	EPA 3005A	23903	EPA 6020B	23932
2615736005	YGWA-18S	EPA 3005A	23903	EPA 6020B	23932
2615736006	YGWA-18I	EPA 3005A	23903	EPA 6020B	23932
2615736007	YGWA-20S	EPA 3005A	23903	EPA 6020B	23932
2615736008	YGWA-21I	EPA 3005A	23903	EPA 6020B	23932
2615736009	YGWC-23S	EPA 3005A	23903	EPA 6020B	23932
2615736010	YGWC-24S	EPA 3005A	23903	EPA 6020B	23932
2615736011	YGWC-33S	EPA 3005A	23903	EPA 6020B	23932
2615736012	YGWC-36	EPA 3005A	23903	EPA 6020B	23932
2615736013	EB-3-3-5-19	EPA 3005A	23903	EPA 6020B	23932
2615736014	EB-4-3-6-19	EPA 3005A	23903	EPA 6020B	23932
2615736015	DUP-3	EPA 3005A	23903	EPA 6020B	23932
2615736016	DUP-4	EPA 3005A	23903	EPA 6020B	23932
2615736017	FB-3-3-5-19	EPA 3005A	23903	EPA 6020B	23932
2615736018	FB-4-3-6-19	EPA 3005A	23903	EPA 6020B	23932
2615736001	YGWA-4I	EPA 7470A	23871	EPA 7470A	23922
2615736002	YGWA-5I	EPA 7470A	23871	EPA 7470A	23922
2615736003	YGWA-5D	EPA 7470A	23871	EPA 7470A	23922
2615736004	YGWA-17S	EPA 7470A	23871	EPA 7470A	23922
2615736005	YGWA-18S	EPA 7470A	23871	EPA 7470A	23922
2615736006	YGWA-18I	EPA 7470A	23871	EPA 7470A	23922
2615736007	YGWA-20S	EPA 7470A	23871	EPA 7470A	23922
2615736008	YGWA-21I	EPA 7470A	23871	EPA 7470A	23922
2615736009	YGWC-23S	EPA 7470A	23871	EPA 7470A	23922
2615736010	YGWC-24S	EPA 7470A	23871	EPA 7470A	23922
2615736011	YGWC-33S	EPA 7470A	23871	EPA 7470A	23922
2615736012	YGWC-36	EPA 7470A	23871	EPA 7470A	23922
2615736013	EB-3-3-5-19	EPA 7470A	23871	EPA 7470A	23922
2615736014	EB-4-3-6-19	EPA 7470A	23871	EPA 7470A	23922
2615736015	DUP-3	EPA 7470A	23871	EPA 7470A	23922
2615736016	DUP-4	EPA 7470A	23871	EPA 7470A	23922
2615736017	FB-3-3-5-19	EPA 7470A	23871	EPA 7470A	23922
2615736018	FB-4-3-6-19	EPA 7470A	23871	EPA 7470A	23922
2615736001	YGWA-4I	EPA 300.0	23825		
2615736002	YGWA-5I	EPA 300.0	23825		
2615736003	YGWA-5D	EPA 300.0	23825		
2615736004	YGWA-17S	EPA 300.0	23825		
2615736005	YGWA-18S	EPA 300.0	23825		
2615736006	YGWA-18I	EPA 300.0	23825		
2615736007	YGWA-20S	EPA 300.0	23825		
2615736008	YGWA-21I	EPA 300.0	23825		
2615736009	YGWC-23S	EPA 300.0	23825		
2615736010	YGWC-24S	EPA 300.0	23825		
2615736011	YGWC-33S	EPA 300.0	23825		
2615736012	YGWC-36	EPA 300.0	23825		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615736

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2615736013	**EB-3-3-5-19**	EPA 300.0	23825		
2615736014	**EB-4-3-6-19**	EPA 300.0	23825		
2615736015	**DUP-3**	EPA 300.0	23825		
2615736016	**DUP-4**	EPA 300.0	23825		
2615736017	**FB-3-3-5-19**	EPA 300.0	23825		
2615736018	**FB-4-3-6-19**	EPA 300.0	23825		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. IV (EPA 6020/7470)	Fluoride	Radium 226 & 228 (SW846 9315/9320)	LAB ID NUMBER
	CONTAINER TYPE:						P	P	P	
	PRESERVATION:						3	7	3	
3-5-19	1100	W		✓	EB-3-3-5-19	4	1	1	2	13
3-6-19	1045	W		✓	EB-4-3-6-19	4	1	1	2	14
3-6-19	—	GW		✓	Dup-3	4	1	1	2	15
3-6-19	—	GW		✓	Dup-4	4	1	1	2	16
3-5-19	1330	W		✓	FB-3-3-5-19	4	1	1	2	17
3-6-19	1345	W		✓	FB-4-3-6-19	4	1	1	2	18

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: C. Packer, H. Auld / ACC — DATE/TIME: See above

RELINQUISHED BY: — DATE/TIME: 3-6-19 / 1613

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: — DATE/TIME: 3/6/19 1613

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA — Ice: Yes No NA — Temperature: Min 2 4°C Max — Custody Seal: Intact Broken Not Present — # of Coolers — Cooler ID:

WO#: 2615736

2615736

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

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241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. IV (EPA 6020/7470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P	P	
					PRESERVATION:		3	7	3	
3-4-19	1435	GW		✓	YGWA-41	4	1	1	2	1
3-4-19	1317	GW		✓	YGWA-5I	4	1	1	2	2
3-4-19	1203	GW		✓	YGWA-5D	4	1	1	2	3
3-5-19	1138	GW		✓	YGWA-17S	4	1	1	2	4
3-5-19	1653	GW		✓	YGWA-18S	4	1	1	2	5
3-6-19	1125	GW		✓	YGWA-18I	4	1	1	2	6
3-5-19	1340	GW		✓	YGWA-20S	4	1	1	2	7
3-5-19	1205	GW		✓	YGWA-21I	4	1	1	2	8
3-6-19	1315	GW		✓	YGWC-23S	6	1	1	4	9
3-5-19	1455	GW		✓	YGWC-24S	4	1	1	2	10
3-6-19	1300	GW		✓	YGWC-33S	4	1	1	2	11
3-6-19	1130	GW		✓	YGWC-36	4	1	1	2	12

extra Rad here

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: C. Parker, H. Auld ATC

DATE/TIME: See above

RELINQUISHED BY:

DATE/TIME: 3-6-19 1613

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

FOR LAB USE ONLY

LAB #: WO#: 2615736

RECEIVED BY LAB:

DATE/TIME: 3/6/19 1613

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min: 2 Max: 4 °C

Custody Seal: Intact Broken Not Present

# of Coolers:

Cooler ID:

PM: BM Due Date: 03/13/19

CLIENT: GAPower-CCR

APPROV

Sample Condition Upon Receipt

WO#: 2615736

Pace Analytical

Client Name: Georgia Power - CCR

PM: BM Due Date: 03/13/19

CLIENT: GAPower-CCR

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

Optional
Proj. Due Date:
Proj. Name:

Tracking #: _____

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used 082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.4°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/7/19 JW

Temp should be above freezing to 6°C Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.	
Trip Blank Present:	☐Yes ☐No ☑N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A		
Pace Trip Blank Lot # (if purchased): _____			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 04, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 4/2/2019. The report has been revised to correct a sample ID per consultant request. No other changes have been made to this report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2615739001	YGWA-4I	Water	03/04/19 14:35	03/06/19 16:13
2615739002	YGWA-5I	Water	03/04/19 13:17	03/06/19 16:13
2615739003	YGWA-5D	Water	03/04/19 12:03	03/06/19 16:13
2615739004	YGWA-17S	Water	03/05/19 11:38	03/06/19 16:13
2615739005	YGWA-18S	Water	03/05/19 16:53	03/06/19 16:13
2615739006	YGWA-18I	Water	03/06/19 11:25	03/06/19 16:13
2615739007	YGWA-20S	Water	03/05/19 13:40	03/06/19 16:13
2615739008	YGWA-21I	Water	03/05/19 12:05	03/06/19 16:13
2615739009	YGWC-23S	Water	03/06/19 13:15	03/06/19 16:13
2615739010	YGWC-24S	Water	03/05/19 14:55	03/06/19 16:13
2615739011	YGWC-33S	Water	03/06/19 13:00	03/06/19 16:13
2615739012	YGWC-36	Water	03/06/19 11:30	03/06/19 16:13
2615739013	EB-3-3-5-19	Water	03/05/19 11:00	03/06/19 16:13
2615739014	EB-4-3-6-19	Water	03/06/19 10:45	03/06/19 16:13
2615739015	DUP-3	Water	03/06/19 00:00	03/06/19 16:13
2615739016	DUP-4	Water	03/06/19 00:00	03/06/19 16:13
2615739017	FB-3-3-5-19	Water	03/05/19 13:30	03/06/19 16:13
2615739018	FB-4-3-6-19	Water	03/06/19 13:45	03/06/19 16:13

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2615739001	YGWA-4I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739002	YGWA-5I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739003	YGWA-5D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739004	YGWA-17S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739005	YGWA-18S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739006	YGWA-18I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739007	YGWA-20S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739008	YGWA-21I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739009	YGWC-23S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739010	YGWC-24S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739011	YGWC-33S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739012	YGWC-36	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739013	EB-3-3-5-19	EPA 9315	LAL	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739014	**EB-4-3-6-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739015	**DUP-3**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739016	**DUP-4**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739017	**FB-3-3-5-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2615739018	**FB-4-3-6-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-4I **Lab ID: 2615739001** Collected: 03/04/19 14:35 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.593 ± 0.324 (0.460) C:88% T:NA**	pCi/L	03/20/19 08:33	13982-63-3	
Radium-228	EPA 9320	**0.620 ± 0.507 (1.03) C:77% T:87%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**1.21 ± 0.831 (1.49)**	pCi/L	03/28/19 15:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-5I **Lab ID: 2615739002** Collected: 03/04/19 13:17 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.561 ± 0.328 (0.486) C:84% T:NA**	pCi/L	03/20/19 08:32	13982-63-3	
Radium-228	EPA 9320	**0.442 ± 0.359 (0.715) C:72% T:90%**	pCi/L	03/27/19 12:58	15262-20-1	
Total Radium	Total Radium Calculation	**1.00 ± 0.687 (1.20)**	pCi/L	03/28/19 15:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-5D **Lab ID: 2615739003** Collected: 03/04/19 12:03 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**3.08 ± 0.790 (0.590) C:87% T:NA**	pCi/L	03/20/19 08:32	13982-63-3	
Radium-228	EPA 9320	**1.35 ± 0.489 (0.716) C:72% T:91%**	pCi/L	03/27/19 12:58	15262-20-1	
Total Radium	Total Radium Calculation	**4.43 ± 1.28 (1.31)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-17S **Lab ID: 2615739004** Collected: 03/05/19 11:38 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.223 ± 0.235 (0.464) C:95% T:NA**	pCi/L	03/20/19 08:33	13982-63-3	
Radium-228	EPA 9320	**0.0490 ± 0.394 (0.897) C:76% T:91%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.272 ± 0.629 (1.36)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-18S **Lab ID: 2615739005** Collected: 03/05/19 16:53 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.264 ± 0.250 (0.483) C:97% T:NA**	pCi/L	03/20/19 08:33	13982-63-3	
Radium-228	EPA 9320	**0.210 ± 0.458 (1.01) C:75% T:82%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.474 ± 0.708 (1.49)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-18I **Lab ID: 2615739006** Collected: 03/06/19 11:25 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.502 ± 0.292 (0.403) C:90% T:NA**	pCi/L	03/20/19 08:33	13982-63-3	
Radium-228	EPA 9320	**0.212 ± 0.352 (0.767) C:74% T:91%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.714 ± 0.644 (1.17)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-20S **Lab ID: 2615739007** Collected: 03/05/19 13:40 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.424 ± 0.295 (0.489) C:88% T:NA**	pCi/L	03/20/19 08:33	13982-63-3	
Radium-228	EPA 9320	**0.416 ± 0.501 (1.06) C:73% T:82%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.840 ± 0.796 (1.55)**	pCi/L	03/28/19 15:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWA-21I **Lab ID: 2615739008** Collected: 03/05/19 12:05 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.985 ± 0.404 (0.437) C:89% T:NA**	pCi/L	03/20/19 08:33	13982-63-3	
Radium-228	EPA 9320	**-0.181 ± 0.459 (1.08) C:76% T:89%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.985 ± 0.863 (1.52)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWC-23S **Lab ID: 2615739009** Collected: 03/06/19 13:15 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.278 ± 0.229 (0.374) C:88% T:NA**	pCi/L	03/20/19 08:34	13982-63-3	
Radium-228	EPA 9320	**0.458 ± 0.403 (0.814) C:77% T:80%**	pCi/L	03/27/19 16:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.736 ± 0.632 (1.19)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWC-24S **Lab ID: 2615739010** Collected: 03/05/19 14:55 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.229 ± 0.223 (0.406) C:89% T:NA**	pCi/L	03/20/19 08:31	13982-63-3	
Radium-228	EPA 9320	**0.608 ± 0.429 (0.838) C:76% T:87%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.837 ± 0.652 (1.24)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWC-33S **Lab ID: 2615739011** Collected: 03/06/19 13:00 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.939 ± 0.385 (0.403) C:94% T:NA**	pCi/L	03/20/19 08:32	13982-63-3	
Radium-228	EPA 9320	**0.0313 ± 0.370 (0.851) C:75% T:83%**	pCi/L	03/27/19 16:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.970 ± 0.755 (1.25)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: YGWC-36 **Lab ID: 2615739012** Collected: 03/06/19 11:30 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.919 ± 0.425 (0.593) C:87% T:NA**	pCi/L	03/20/19 08:31	13982-63-3	
Radium-228	EPA 9320	**-0.178 ± 0.339 (0.830) C:75% T:83%**	pCi/L	03/27/19 16:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.919 ± 0.764 (1.42)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: EB-3-3-5-19 **Lab ID: 2615739013** Collected: 03/05/19 11:00 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0654 ± 0.159 (0.383) C:91% T:NA**	pCi/L	03/20/19 08:31	13982-63-3	
Radium-228	EPA 9320	**0.181 ± 0.337 (0.739) C:76% T:89%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.246 ± 0.496 (1.12)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: EB-4-3-6-19 **Lab ID: 2615739014** Collected: 03/06/19 10:45 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.471 ± 0.291 (0.425) C:91% T:NA**	pCi/L	03/20/19 08:32	13982-63-3	
Radium-228	EPA 9320	**0.157 ± 0.367 (0.815) C:76% T:89%**	pCi/L	03/27/19 16:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.628 ± 0.658 (1.24)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: DUP-3 **Lab ID: 2615739015** Collected: 03/06/19 00:00 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.154 ± 0.238 (0.524) C:89% T:NA**	pCi/L	03/20/19 08:31	13982-63-3	
Radium-228	EPA 9320	**0.0842 ± 0.386 (0.876) C:73% T:85%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.238 ± 0.624 (1.40)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: DUP-4 **Lab ID: 2615739016** Collected: 03/06/19 00:00 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.936 ± 0.397 (0.479) C:95% T:NA**	pCi/L	03/20/19 08:31	13982-63-3	
Radium-228	EPA 9320	**0.718 ± 0.431 (0.804) C:73% T:86%**	pCi/L	03/27/19 16:13	15262-20-1	
Total Radium	Total Radium Calculation	**1.65 ± 0.828 (1.28)**	pCi/L	03/28/19 15:38	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: FB-3-3-5-19 **Lab ID: 2615739017** Collected: 03/05/19 13:30 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**-0.0550 ± 0.211 (0.598) C:92% T:NA**	pCi/L	03/20/19 08:31	13982-63-3	
Radium-228	EPA 9320	**0.510 ± 0.379 (0.740) C:76% T:87%**	pCi/L	03/27/19 16:12	15262-20-1	
Total Radium	Total Radium Calculation	**0.510 ± 0.590 (1.34)**	pCi/L	03/28/19 15:33	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Sample: FB-4-3-6-19 **Lab ID: 2615739018** Collected: 03/06/19 13:45 Received: 03/06/19 16:13 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.322 ± 0.264 (0.478) C:93% T:NA**	pCi/L	03/20/19 08:34	13982-63-3	
Radium-228	EPA 9320	**-0.0367 ± 0.356 (0.835) C:73% T:85%**	pCi/L	03/27/19 16:13	15262-20-1	
Total Radium	Total Radium Calculation	**0.322 ± 0.620 (1.31)**	pCi/L	03/28/19 15:38	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

QC Batch: 333842 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2615739001, 2615739002, 2615739003, 2615739004, 2615739005, 2615739006, 2615739007, 2615739008, 2615739009, 2615739010, 2615739011, 2615739012, 2615739013, 2615739014, 2615739015, 2615739016, 2615739017, 2615739018

METHOD BLANK: 1624774 Matrix: Water
Associated Lab Samples: 2615739001, 2615739002, 2615739003, 2615739004, 2615739005, 2615739006, 2615739007, 2615739008, 2615739009, 2615739010, 2615739011, 2615739012, 2615739013, 2615739014, 2615739015, 2615739016, 2615739017, 2615739018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0453 ± 0.182 (0.464) C:88% T:NA	pCi/L	03/20/19 08:32	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

QC Batch: 334689 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2615739001, 2615739002, 2615739003, 2615739004, 2615739005, 2615739006, 2615739007, 2615739008, 2615739009, 2615739010, 2615739011, 2615739012, 2615739013, 2615739014, 2615739015, 2615739016, 2615739017, 2615739018

METHOD BLANK: 1628695 Matrix: Water
Associated Lab Samples: 2615739001, 2615739002, 2615739003, 2615739004, 2615739005, 2615739006, 2615739007, 2615739008, 2615739009, 2615739010, 2615739011, 2615739012, 2615739013, 2615739014, 2615739015, 2615739016, 2615739017, 2615739018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0633 ± 0.285 (0.651) C:77% T:86%	pCi/L	03/27/19 12:58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2615739001	YGWA-4I	EPA 9315	333842		
2615739002	YGWA-5I	EPA 9315	333842		
2615739003	YGWA-5D	EPA 9315	333842		
2615739004	YGWA-17S	EPA 9315	333842		
2615739005	YGWA-18S	EPA 9315	333842		
2615739006	YGWA-18I	EPA 9315	333842		
2615739007	YGWA-20S	EPA 9315	333842		
2615739008	YGWA-21I	EPA 9315	333842		
2615739009	YGWC-23S	EPA 9315	333842		
2615739010	YGWC-24S	EPA 9315	333842		
2615739011	YGWC-33S	EPA 9315	333842		
2615739012	YGWC-36	EPA 9315	333842		
2615739013	EB-3-3-5-19	EPA 9315	333842		
2615739014	EB-4-3-6-19	EPA 9315	333842		
2615739015	DUP-3	EPA 9315	333842		
2615739016	DUP-4	EPA 9315	333842		
2615739017	FB-3-3-5-19	EPA 9315	333842		
2615739018	FB-4-3-6-19	EPA 9315	333842		
2615739001	YGWA-4I	EPA 9320	334689		
2615739002	YGWA-5I	EPA 9320	334689		
2615739003	YGWA-5D	EPA 9320	334689		
2615739004	YGWA-17S	EPA 9320	334689		
2615739005	YGWA-18S	EPA 9320	334689		
2615739006	YGWA-18I	EPA 9320	334689		
2615739007	YGWA-20S	EPA 9320	334689		
2615739008	YGWA-21I	EPA 9320	334689		
2615739009	YGWC-23S	EPA 9320	334689		
2615739010	YGWC-24S	EPA 9320	334689		
2615739011	YGWC-33S	EPA 9320	334689		
2615739012	YGWC-36	EPA 9320	334689		
2615739013	EB-3-3-5-19	EPA 9320	334689		
2615739014	EB-4-3-6-19	EPA 9320	334689		
2615739015	DUP-3	EPA 9320	334689		
2615739016	DUP-4	EPA 9320	334689		
2615739017	FB-3-3-5-19	EPA 9320	334689		
2615739018	FB-4-3-6-19	EPA 9320	334689		
2615739001	YGWA-4I	Total Radium Calculation	335990		
2615739002	YGWA-5I	Total Radium Calculation	335990		
2615739003	YGWA-5D	Total Radium Calculation	335990		
2615739004	YGWA-17S	Total Radium Calculation	335990		
2615739005	YGWA-18S	Total Radium Calculation	335990		
2615739006	YGWA-18I	Total Radium Calculation	335990		
2615739007	YGWA-20S	Total Radium Calculation	335990		
2615739008	YGWA-21I	Total Radium Calculation	335990		
2615739009	YGWC-23S	Total Radium Calculation	335992		
2615739010	YGWC-24S	Total Radium Calculation	335992		
2615739011	YGWC-33S	Total Radium Calculation	335992		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2615739

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2615739012	**YGWC-36**	Total Radium Calculation	335992		
2615739013	**EB-3-3-5-19**	Total Radium Calculation	335990		
2615739014	**EB-4-3-6-19**	Total Radium Calculation	335992		
2615739015	**DUP-3**	Total Radium Calculation	335992		
2615739016	**DUP-4**	Total Radium Calculation	335992		
2615739017	**FB-3-3-5-19**	Total Radium Calculation	335990		
2615739018	**FB-4-3-6-19**	Total Radium Calculation	335992		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. IV (EPA 6020/7470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:							P	P	P		
PRESERVATION:							3	7	3		
3-4-19	1435	GW		✓	YGWA-41	4	1	1	2	1	
3-4-19	1317	GW		✓	YGWA-5I	4	1	1	2	2	
3-4-19	1203	GW		✓	YGWA-5D	4	1	1	2	3	
3-5-19	1138	GW		✓	YGWA-17S	4	1	1	2	4	
3-5-19	1653	GW		✓	YGWA-18S	4	1	1	2	5	
3-6-19	1125	GW		✓	YGWA-18I	4	1	1	2	6	
3-5-19	1340	GW		✓	YGWA-20S	4	1	1	2	7	
3-5-19	1205	GW		✓	YGWA-21I	4	1	1	2	8	
3-6-19	1315	GW		✓	YGWC-23S	6	1	1	4	9	extra Rad here
3-5-19	1455	GW		✓	YGWC-24S	4	1	1	2	10	
3-6-19	1300	GW		✓	YGWC-33S	4	1	1	2	11	
3-6-19	1130	GW		✓	YGWC-36	4	1	1	2	12	

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

SAMPLED BY AND TITLE: C. Parker, H. Auld ATC

DATE/TIME: See above

RELINQUISHED BY:

DATE/TIME: 3-6-19 1613

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

FOR LAB USE ONLY
LAB #: WO#: 2615739

RECEIVED BY LAB:

DATE/TIME: 3/6/19 1613

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min 2 4°C Max

Custody Seal: Intact Broken Not Present

# of Coolers:

Cooler ID:

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. IV (EPA 6020/7470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
		CONTAINER TYPE:					P	P	P	
		PRESERVATION:					3	7	3	
3-5-19	1100	W		✓	EB-3-3-5-19	4	1	1	2	13
3-6-19	1045	W		✓	EB-4-3-6-19	4	1	1	2	14
3-6-19	—	GW		✓	Dup-3	4	1	1	2	15
3-6-19	—	GW		✓	Dup-4	4	1	1	2	16
3-5-19	1330	W		✓	FB-3-3-5-19	4	1	1	2	17
3-6-19	1345	W		✓	FB-4-3-6-19	4	1	1	2	18

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: C. Parker, H. Auld / ACC — DATE/TIME: see above

RELINQUISHED BY: — DATE/TIME: 3-6-19 1613

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: — DATE/TIME: 3/6/19 1613

pH Checked: Yes No NA — Ice: Yes No NA — Temperature: Min: 2 Max: 4

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER

Custody Seal: Intact Broken Not Present — # of Coolers — Cooler ID:

FOR LAB USE ONLY
LAB #:

WO# : 2615739

PM: BM Due Date: 04/03/19

CLIENT: GAPower-CCR

Sample Condition Upon Receipt

WO# : 2615739

Pace Analytical

Client Name: Georgia Power - CCR

PM: BM Due Date: 04/03/19

CLIENT: GAPower-CCR

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

Tracking #: _____

Optional: Proj. Due Date: Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used 082 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.4°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 3/7/19 jw

Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: WT			
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.	
Trip Blank Present:	☐Yes ☐No ☑N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A		
Pace Trip Blank Lot # (if purchased): _____			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Product Name: Low-Flow System

Date: 2019-03-04 14:36:46

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWA-4I	Final Pumping Rate	90 mL/min
Well diameter	2 in	Total System Volume	0.7081711 L
Well Total Depth	49.7 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12.2 in
Depth to Water	19.53 ft	Total Volume Pumped	2.9 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	14:14:12	600.03	11.81	6.21	131.39	1.10	20.20	2.09	75.44
Last 5	14:19:12	900.03	12.50	6.18	131.92	1.10	20.35	1.53	77.32
Last 5	14:24:21	1209.01	12.90	6.17	132.82	0.8	20.40	1.41	76.70
Last 5	14:29:21	1509.03	12.97	6.18	131.88	0.70	20.50	1.35	77.08
Last 5	14:34:21	1809.02	12.90	6.18	131.39	0.70	20.55	1.36	77.09
Variance 0			0.40	-0.01	0.90			-0.12	-0.63
Variance 1			0.07	0.00	-0.94			-0.05	0.38
Variance 2			-0.06	-0.00	-0.49			0.00	0.01

Notes

Sampled at 1435 on 3-4-19. Partly cloudy, 40s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-04 13:17:41

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	59 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	53 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5I	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.7483419 L
Well Total Depth	58.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.6 in
Depth to Water	15.5 ft	Total Volume Pumped	5.9 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	12:54:21	600.04	13.99	5.92	72.81	1.00	15.80	5.76	90.08
Last 5	12:59:24	903.02	14.22	5.86	72.97	1.20	15.80	6.02	92.54
Last 5	13:04:24	1203.03	14.30	5.78	73.66	0.80	15.80	6.41	103.73
Last 5	13:09:27	1506.02	14.27	5.78	74.68	0.95	15.80	6.16	105.20
Last 5	13:14:36	1815.01	14.36	5.75	75.10	0.90	15.80	6.43	108.02
Variance 0			0.08	-0.08	0.70			0.40	11.19
Variance 1			-0.03	-0.00	1.02			-0.25	1.47
Variance 2			0.09	-0.03	0.42			0.27	2.82

Notes

Sampled at 1317 on 3-4-19. Sunny, 40.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-04 12:03:26

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	132 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	105 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5D	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	1.074172 L
Well Total Depth	131.6 ft	Calculated Sample Rate	300 sec
Screen Length	50 ft	Stabilization Drawdown	4.2 in
Depth to Water	23.75 ft	Total Volume Pumped	4.6 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	11:39:56	905.03	12.40	7.42	199.89	0.60	24.10	0.17	-106.99
Last 5	11:44:56	1205.03	12.54	7.53	200.97	0.55	24.10	0.12	-122.30
Last 5	11:49:59	1508.02	12.55	7.50	188.11	0.50	24.10	0.11	-121.19
Last 5	11:55:07	1816.01	12.58	7.47	183.72	0.5	24.10	0.10	-116.70
Last 5	12:00:08	2117.01	12.57	7.46	182.07	0.50	24.10	0.09	-117.63
Variance 0			0.01	-0.03	-12.87			-0.02	1.11
Variance 1			0.03	-0.04	-4.38			-0.01	4.48
Variance 2			-0.01	-0.01	-1.65			-0.01	-0.93

Notes

Sampled at 1203 on 3-4-19. Cloudy, 30s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-05 11:38:40

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	32 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	26 ft

Well Information:		Pumping Information:	
Well ID	YGWA-17S	Final Pumping Rate	210 mL/min
Well diameter	2 in	Total System Volume	0.7938874 L
Well Total Depth	31.61 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.2 in
Depth to Water	9.95 ft	Total Volume Pumped	10.1 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	11:16:19	1501.03	15.66	5.48	80.17	5.10	10.30	2.52	136.05
Last 5	11:21:24	1806.02	15.35	5.48	81.13	5.40	10.30	1.72	136.72
Last 5	11:26:24	2106.01	15.35	5.49	81.63	5.40	10.30	1.57	131.15
Last 5	11:31:24	2406.01	15.57	5.48	81.71	4.87	10.30	1.53	135.86
Last 5	11:36:25	2706.99	15.71	5.48	81.97	4.40	10.30	1.49	129.38
Variance 0			0.00	0.01	0.50			-0.15	-5.57
Variance 1			0.22	-0.01	0.08			-0.04	4.71
Variance 2			0.14	0.00	0.26			-0.04	-6.48

Notes

Sampled at 1138 on 3-5-19. Sunny, 30s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-05 16:52:55

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18S	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.86 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	16.32 in
Depth to Water	17.04 ft	Total Volume Pumped	32.4 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	16:31:35	9644.91	15.13	5.26	61.26	10.10	18.40	3.40	128.84
Last 5	16:36:49	9958.91	15.17	5.26	61.33	9.40	18.40	3.39	128.75
Last 5	16:41:49	10258.90	15.14	5.26	61.34	9.70	10.40	3.38	131.19
Last 5	16:46:49	10558.90	15.17	5.27	61.35	9.90	10.40	3.36	128.00
Last 5	16:51:50	10859.89	15.20	5.26	61.60	9.30	10.40	3.37	128.06
Variance 0			-0.02	-0.00	0.02			-0.01	2.44
Variance 1			0.02	0.01	0.00			-0.02	-3.20
Variance 2			0.03	-0.00	0.25			0.02	0.06

Notes

Sampled at 1653 on 3-5-19. Sunny, 40s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-06 11:25:43

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	74 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18I	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	79.67 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	20.86 ft	Total Volume Pumped	7.5 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	11:03:58	1500.01	14.40	6.01	89.46	1.50	20.90	4.06	93.78
Last 5	11:08:58	1800.04	14.58	5.99	83.85	1.60	20.90	4.04	94.35
Last 5	11:13:59	2101.02	14.53	6.02	90.04	1.70	20.85	4.22	93.20
Last 5	11:19:02	2404.02	14.66	6.01	90.00	1.60	20.85	4.45	95.48
Last 5	11:24:02	2704.01	14.36	5.99	90.23	1.90	20.86	4.38	99.08
Variance 0			-0.05	0.02	6.19			0.18	-1.15
Variance 1			0.13	-0.01	-0.04			0.23	2.29
Variance 2			-0.30	-0.02	0.23			-0.07	3.60

Notes

Sampled at 1125 on 3-6-19. Sunny, 30s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-05 13:40:15

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates - AP 3	Tubing Length	30 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	596190		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	YGWA-20S	Final Pumping Rate	170 mL/min
Well diameter	2 in	Total System Volume	0.6189027 L
Well Total Depth	29.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	10.87 ft	Total Volume Pumped	6.8 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:16:56	900.00	15.44	6.14	63.25	6.25	11.40	5.32	98.63
Last 5	13:21:56	1199.99	15.44	6.08	63.16	5.97	11.40	5.17	91.97
Last 5	13:26:56	1499.99	15.54	6.07	62.96	5.76	11.40	5.24	93.69
Last 5	13:31:56	1799.97	15.48	6.07	62.80	5.14	11.40	5.24	95.24
Last 5	13:36:56	2099.97	15.48	6.07	62.57	4.50	11.40	5.21	92.44
Variance 0			0.11	-0.01	-0.20			0.08	1.72
Variance 1			-0.06	-0.00	-0.16			-0.00	1.54
Variance 2			-0.00	0.01	-0.23			-0.03	-2.80

Notes

Sampled at 13:40. Sunny 30s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-05 12:05:17

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates - AP 3	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	596190		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-21I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.07 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	- ft	Total Volume Pumped	2.8 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:43:01	900.03	12.11	6.93	182.53	1.07	--	0.73	-87.61
Last 5	11:48:01	1199.99	11.70	7.00	199.26	0.77	--	0.54	-107.54
Last 5	11:53:01	1499.97	13.39	7.13	217.67	0.54	--	0.26	-133.28
Last 5	11:58:01	1799.97	13.76	7.20	219.08	0.65	--	0.24	-136.99
Last 5	12:03:01	2099.96	13.76	7.22	221.68	0.56	--	0.18	-140.86
Variance 0			1.69	0.13	18.41			-0.28	-25.74
Variance 1			0.37	0.07	1.40			-0.02	-3.70
Variance 2			0.00	0.02	2.60			-0.05	-3.87

Notes

Sampled at 12:05. Sunny 30s. Transducer in well.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-06 13:15:55

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	598939		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	34 ft

Well Information:		Pumping Information:	
Well ID	YGWC-23S	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.18 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	4.7 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	12:54:31	300.05	16.66	5.94	77.83	1.40	0.00	8.79	119.31
Last 5	12:59:31	600.05	16.81	5.89	76.15	1.20	--	8.64	119.14
Last 5	13:04:31	900.04	16.65	5.87	74.99	1.00	--	8.64	119.81
Last 5	13:09:31	1200.04	17.01	5.86	74.93	0.80	--	8.57	123.37
Last 5	13:14:31	1500.04	16.96	5.84	74.64	0.93	--	8.68	122.43
Variance 0			-0.17	-0.02	-1.17			0.00	0.67
Variance 1			0.36	-0.01	-0.06			-0.08	3.57
Variance 2			-0.05	-0.02	-0.29			0.11	-0.94

Notes

Sampled at 1315 on 3-6-19. Sunny, 40s. Transducer in well, no WL.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-05 14:53:03

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates - AP 3	Tubing Length	57 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	596190		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	52'

Well Information:		Pumping Information:	
Well ID	YGWC-24S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.035206 L
Well Total Depth	57.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8 in
Depth to Water	26.43 ft	Total Volume Pumped	5.4 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:30:28	300.01	15.12	6.25	68.51	4.35	26.80	6.27	100.70
Last 5	14:35:28	600.00	15.70	5.77	66.93	1.28	27.00	6.31	116.80
Last 5	14:40:28	900.00	15.68	5.74	66.27	1.80	27.10	6.23	116.93
Last 5	14:45:28	1199.98	16.02	5.74	66.11	0.92	27.10	6.15	115.07
Last 5	14:50:28	1499.98	16.06	5.72	66.36	0.63	27.10	6.15	116.59
Variance 0			-0.02	-0.04	-0.66			-0.08	0.12
Variance 1			0.34	0.00	-0.16			-0.09	-1.85
Variance 2			0.04	-0.02	0.25			0.00	1.52

Notes

Sampled at 14:55. Sunny 30s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-06 12:59:11

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates - AP 3	Tubing Length	38 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	596190		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	YGWC-33S	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8518038 L
Well Total Depth	38.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	9 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:35:19	900.00	17.57	3.28	1416.98	1.67	--	1.14	285.53
Last 5	12:40:19	1199.99	17.99	3.28	1411.66	1.52	--	0.67	279.21
Last 5	12:45:19	1499.99	17.85	3.27	1405.50	1.40	--	0.58	274.06
Last 5	12:50:19	1799.98	17.97	3.27	1409.21	1.71	--	0.56	268.25
Last 5	12:55:19	2099.97	18.05	3.27	1404.44	1.39	--	0.56	268.62
Variance 0			-0.13	-0.01	-6.16			-0.09	-5.14
Variance 1			0.12	0.00	3.71			-0.02	-5.82
Variance 2			0.08	0.00	-4.77			-0.01	0.37

Notes

Transducer in well
Sampled at 1300. Sunny 40s. DUP 4 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-06 11:29:34

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates - AP 3	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	596190		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-36	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	60.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	5.6 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:05:58	300.06	16.64	6.18	380.48	2.35	--	1.98	64.69
Last 5	11:10:58	600.02	16.87	5.30	361.44	0.93	--	2.13	121.48
Last 5	11:15:58	900.01	17.08	5.21	357.04	1.14	--	2.00	124.54
Last 5	11:20:58	1199.99	17.01	5.24	355.96	0.98	--	1.97	125.60
Last 5	11:25:58	1499.99	17.06	5.21	355.56	1.25	--	1.94	125.31
Variance 0			0.21	-0.09	-4.39			-0.13	3.05
Variance 1			-0.07	0.03	-1.08			-0.03	1.07
Variance 2			0.05	-0.03	-0.39			-0.03	-0.29

Notes

Sampled at 11:30. Sunny 30s. EB 4 here at 10:45 - gloves.

Transducer in well.

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 07, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates- Pond A
Pace Project No.: 2616762

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates- Pond A
Pace Project No.: 2616762

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates- Pond A
Pace Project No.: 2616762

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616762001	**YGWC-49**	Water	03/28/19 10:30	03/29/19 10:10

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(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates- Pond A
Pace Project No.: 2616762

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616762001	**YGWC-49**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates- Pond A
Pace Project No.: 2616762

Sample: YGWC-49 **Lab ID: 2616762001** Collected: 03/28/19 10:30 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 22:43	7440-42-8	
Calcium	**11.3J**	mg/L	25.0	0.69	50	04/03/19 11:25	04/04/19 22:49	7440-70-2	D3
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**164**	mg/L	25.0	10.0	1		04/03/19 18:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.4**	mg/L	0.25	0.024	1		04/05/19 03:15	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 03:15	16984-48-8	
Sulfate	**82.8**	mg/L	10.0	0.17	10		04/06/19 11:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates- Pond A
Pace Project No.: 2616762

QC Batch: 25683 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616762001

METHOD BLANK: 115845 Matrix: Water
Associated Lab Samples: 2616762001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	04/04/19 18:37	
Calcium	mg/L	ND	0.50	0.014	04/04/19 18:37	

LABORATORY CONTROL SAMPLE: 115846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	100	80-120	
Calcium	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115847 115848

Parameter	Units	2616761004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.89	1	1	1.8	1.8	94	89	75-125	2	20	
Calcium	mg/L	54.2	1	1	58.6	54.4	439	16	75-125	7	20	M6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates- Pond A
Pace Project No.: 2616762

QC Batch: 25701
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616762001

LABORATORY CONTROL SAMPLE: 115944

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	399	100	84-108	

SAMPLE DUPLICATE: 115945

Parameter	Units	2616761001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	170	167	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates- Pond A
Pace Project No.: 2616762

QC Batch: 25766
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616762001

METHOD BLANK: 116236 Matrix: Water
Associated Lab Samples: 2616762001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.053J	0.25	0.024	04/04/19 18:36	
Fluoride	mg/L	ND	0.30	0.029	04/04/19 18:36	
Sulfate	mg/L	0.060J	1.0	0.017	04/04/19 18:36	

LABORATORY CONTROL SAMPLE: 116237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 116238 116239

Parameter	Units	2616760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.4	10	10	11.2	11.4	99	100	90-110	1	15	
Fluoride	mg/L	ND	10	10	9.8	9.9	98	99	90-110	1	15	
Sulfate	mg/L	17.7	10	10	26.1	26.2	84	85	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 116240

Parameter	Units	2616760002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4.4	10	14.7	103	90-110	
Fluoride	mg/L	ND	10	10.1	101	90-110	
Sulfate	mg/L	34.3	10	41.3	69	90-110	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates- Pond A
Pace Project No.: 2616762

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates- Pond A
Pace Project No.: 2616762

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616762001	**YGWC-49**	EPA 3005A	25683	EPA 6020B	25758
2616762001	**YGWC-49**	SM 2540C	25701		
2616762001	**YGWC-49**	EPA 300.0	25766		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Pond A

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		CONTAINER TYPE: P	CONTAINER TYPE: P
								PRESERVATION: 3	PRESERVATION: 7
								Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)
3/28/19	1030	GW		✓	YGWC-49	2		1	1

LAB ID NUMBER

CONTAINER TYPE		PRESERVATION	
P	PLASTIC	1	HCl, ≤6°C
A	AMBER GLASS	2	H_2SO_4, ≤6°C
G	CLEAR GLASS	3	HNO_3
V	VOA VIAL	4	NaOH, ≤6°C
S	STERILE	5	NaOH/ZnAc, ≤6°C
O	OTHER	6	$Na_2S_2O_3$, ≤6°C
		7	≤6°C not frozen

*MATRIX CODES:

DW	DRINKING WATER	S	SOIL
WW	WASTEWATER	SL	SLUDGE
GW	GROUNDWATER	SD	SOLID
SW	SURFACE WATER	A	AIR
ST	STORM WATER	L	LIQUID
W	WATER	P	PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO# : 2616762

2616762

SAMPLED BY AND TITLE: [signature] | DATE/TIME: 3-29-19 (See above) PC

RELINQUISHED BY: [signature] | DATE/TIME: 3-29-19 1016

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: Malzman | DATE/TIME: 03/29/19 1010

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 0.3 Max

Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

APP III

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Powere

Project #

WO#: 2616762

PM: BM Due Date: 04/05/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None

Cooler Temperature 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 3/29/19 MK

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Product Name: Low-Flow System

Date: 2019-03-28 10:31:00

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - Pond A	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	79 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	74 ft

Well Information:		Pumping Information:	
Well ID	YGWC-49	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	1.247566 L
Well Total Depth	79.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5 in
Depth to Water	29.32 ft	Total Volume Pumped	6.4 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:09:33	900.00	16.92	5.95	260.01	3.70	29.70	2.20	151.43
Last 5	10:14:33	1199.99	17.18	5.90	259.29	3.25	29.70	2.17	153.64
Last 5	10:19:33	1499.98	17.36	5.88	259.56	3.42	29.70	2.12	154.61
Last 5	10:24:33	1799.98	17.62	5.86	259.42	2.82	29.70	2.07	155.18
Last 5	10:29:33	2099.97	17.72	5.86	259.54	2.67	29.70	2.08	153.60
Variance 0			0.18	-0.02	0.27			-0.06	0.97
Variance 1			0.26	-0.02	-0.14			-0.04	0.57
Variance 2			0.10	-0.00	0.12			0.01	-1.58

Notes

Sampled at 10:30. Sunny 50s

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 12, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Eben Buchanan for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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CERTIFICATIONS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2617035001	**YGWA-4I**	Water	04/03/19 13:50	04/04/19 17:22
2617035002	**YGWA-5I**	Water	04/03/19 15:40	04/04/19 17:22
2617035003	**YGWA-5D**	Water	04/03/19 13:55	04/04/19 17:22
2617035004	**YGWA-17S**	Water	04/02/19 15:10	04/04/19 17:22
2617035005	**YGWA-18S**	Water	04/03/19 10:15	04/04/19 17:22
2617035006	**YGWA-18I**	Water	04/03/19 11:35	04/04/19 17:22
2617035007	**YGWA-20S**	Water	04/03/19 12:30	04/04/19 17:22
2617035008	**YGWA-21I**	Water	04/02/19 15:56	04/04/19 17:22
2617035009	**YGWC-23S**	Water	04/04/19 13:05	04/04/19 17:22
2617035010	**YGWC-24S**	Water	04/04/19 12:20	04/04/19 17:22
2617035011	**YGWC-33S**	Water	04/04/19 11:35	04/04/19 17:22
2617035012	**YGWC-36**	Water	04/04/19 14:35	04/04/19 17:22
2617035013	**EB-1-4-3-19**	Water	04/03/19 11:00	04/04/19 17:22
2617035014	**EB-2-4-4-19**	Water	04/04/19 11:25	04/04/19 17:22
2617035015	**Dup-1**	Water	04/03/19 00:00	04/04/19 17:22
2617035016	**Dup-2**	Water	04/04/19 00:00	04/04/19 17:22
2617035017	**FB-1-4-3-19**	Water	04/03/19 13:20	04/04/19 17:22
2617035018	**FB-2-4-4-19**	Water	04/04/19 13:25	04/04/19 17:22

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SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2617035001	YGWA-4I	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035002	YGWA-5I	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035003	YGWA-5D	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035004	YGWA-17S	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035005	YGWA-18S	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035006	YGWA-18I	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035007	YGWA-20S	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035008	YGWA-21I	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035009	YGWC-23S	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035010	YGWC-24S	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035011	YGWC-33S	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035012	YGWC-36	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035013	EB-1-4-3-19	EPA 6020B	CSW	12

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SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035014	**EB-2-4-4-19**	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035015	**Dup-1**	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035016	**Dup-2**	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035017	**FB-1-4-3-19**	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2617035018	**FB-2-4-4-19**	EPA 6020B	CSW	12
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-4I **Lab ID: 2617035001** Collected: 04/03/19 13:50 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 21:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 21:44	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 21:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 21:44	7440-41-7	
Boron	**0.0055J**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 21:44	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 21:44	7440-43-9	
Calcium	**8.4**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 21:44	7440-70-2	M1
Cobalt	**0.00083J**	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 21:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 21:44	7439-92-1	
Lithium	**0.014J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 21:44	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 21:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 21:44	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**111**	mg/L	25.0	10.0	1		04/10/19 16:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.3**	mg/L	0.25	0.024	1		04/08/19 23:25	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/08/19 23:25	16984-48-8	
Sulfate	**8.5**	mg/L	1.0	0.017	1		04/08/19 23:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-5I **Lab ID: 2617035002** Collected: 04/03/19 15:40 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 22:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 22:35	7440-38-2	
Barium	**0.023**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 22:35	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 22:35	7440-41-7	
Boron	**0.0044J**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 22:35	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 22:35	7440-43-9	
Calcium	**2.8**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 22:35	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 22:35	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 22:35	7439-92-1	
Lithium	**0.0035J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 22:35	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 22:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 22:35	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**83.0**	mg/L	25.0	10.0	1		04/10/19 16:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.2**	mg/L	0.25	0.024	1		04/09/19 00:27	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 00:27	16984-48-8	
Sulfate	**2.1**	mg/L	1.0	0.017	1		04/09/19 00:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-5D **Lab ID: 2617035003** Collected: 04/03/19 13:55 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 22:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 22:47	7440-38-2	
Barium	**0.0087J**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 22:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 22:47	7440-41-7	
Boron	**0.0076J**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 22:47	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 22:47	7440-43-9	
Calcium	**24.7J**	mg/L	25.0	0.69	50	04/08/19 11:40	04/10/19 22:52	7440-70-2	D3
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 22:47	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 22:47	7439-92-1	
Lithium	**0.0070J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 22:47	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 22:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 22:47	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**142**	mg/L	25.0	10.0	1		04/10/19 16:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.0**	mg/L	0.25	0.024	1		04/09/19 00:48	16887-00-6	
Fluoride	**0.047J**	mg/L	0.30	0.029	1		04/09/19 00:48	16984-48-8	
Sulfate	**7.0**	mg/L	1.0	0.017	1		04/09/19 00:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-17S **Lab ID: 2617035004** Collected: 04/02/19 15:10 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 22:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 22:58	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 22:58	7440-39-3	
Beryllium	**0.000090J**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 22:58	7440-41-7	
Boron	**0.0066J**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 22:58	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 22:58	7440-43-9	
Calcium	**2.5**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 22:58	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 22:58	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 22:58	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 22:58	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 22:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 22:58	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**72.0**	mg/L	25.0	10.0	1		04/09/19 18:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.8**	mg/L	0.25	0.024	1		04/09/19 01:09	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 01:09	16984-48-8	
Sulfate	**5.1**	mg/L	1.0	0.017	1		04/09/19 01:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-18S **Lab ID: 2617035005** Collected: 04/03/19 10:15 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 23:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 23:10	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 23:10	7440-39-3	
Beryllium	**0.000075J**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 23:10	7440-41-7	
Boron	**0.0053J**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 23:10	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 23:10	7440-43-9	
Calcium	**1.2**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 23:10	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 23:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 23:10	7439-92-1	
Lithium	**0.0028J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 23:10	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 23:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 23:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**63.0**	mg/L	25.0	10.0	1		04/10/19 16:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.3**	mg/L	0.25	0.024	1		04/09/19 01:29	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 01:29	16984-48-8	
Sulfate	**1.3**	mg/L	1.0	0.017	1		04/09/19 01:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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110 Technology Parkway
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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-18I **Lab ID: 2617035006** Collected: 04/03/19 11:35 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 23:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 23:21	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 23:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 23:21	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 23:21	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 23:21	7440-43-9	
Calcium	**5.3**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 23:21	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 23:21	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 23:21	7439-92-1	
Lithium	**0.0035J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 23:21	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 23:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 23:21	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**89.0**	mg/L	25.0	10.0	1		04/10/19 16:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.9**	mg/L	0.25	0.024	1		04/09/19 01:50	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 01:50	16984-48-8	
Sulfate	**0.82J**	mg/L	1.0	0.017	1		04/09/19 01:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-20S **Lab ID: 2617035007** Collected: 04/03/19 12:30 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 23:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 23:44	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 23:44	7440-39-3	
Beryllium	**0.000064J**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 23:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 23:44	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 23:44	7440-43-9	
Calcium	**2.9**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 23:44	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 23:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 23:44	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 23:44	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 23:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 23:44	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**57.0**	mg/L	25.0	10.0	1		04/10/19 16:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.1**	mg/L	0.25	0.024	1		04/09/19 02:11	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 02:11	16984-48-8	
Sulfate	**0.12J**	mg/L	1.0	0.017	1		04/09/19 02:11	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWA-21I **Lab ID: 2617035008** Collected: 04/02/19 15:56 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0011J**	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/10/19 23:55	7440-36-0	
Arsenic	**0.00096J**	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/10/19 23:55	7440-38-2	
Barium	**0.011**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/10/19 23:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/10/19 23:55	7440-41-7	
Boron	**0.011J**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/10/19 23:55	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/10/19 23:55	7440-43-9	
Calcium	**8.8**	mg/L	0.50	0.014	1	04/08/19 11:40	04/10/19 23:55	7440-70-2	
Cobalt	**0.0039J**	mg/L	0.010	0.00052	1	04/08/19 11:40	04/10/19 23:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/10/19 23:55	7439-92-1	
Lithium	**0.0051J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/10/19 23:55	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/10/19 23:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/10/19 23:55	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**134**	mg/L	25.0	10.0	1		04/09/19 18:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.5**	mg/L	0.25	0.024	1		04/09/19 02:32	16887-00-6	
Fluoride	**0.12J**	mg/L	0.30	0.029	1		04/09/19 02:32	16984-48-8	
Sulfate	**3.8**	mg/L	1.0	0.017	1		04/09/19 02:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWC-23S **Lab ID: 2617035009** Collected: 04/04/19 13:05 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 00:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 00:07	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 00:07	7440-39-3	
Beryllium	**0.000072J**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 00:07	7440-41-7	
Boron	**0.60**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 00:07	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 00:07	7440-43-9	
Calcium	**3.7**	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 00:07	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 00:07	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 00:07	7439-92-1	
Lithium	**0.0018J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 00:07	7439-93-2	
Selenium	**0.017**	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 00:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 00:07	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**85.0**	mg/L	25.0	10.0	1		04/11/19 19:34		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.7**	mg/L	0.25	0.024	1		04/09/19 04:15	16887-00-6	
Fluoride	**0.049J**	mg/L	0.30	0.029	1		04/09/19 04:15	16984-48-8	
Sulfate	**27.9**	mg/L	1.0	0.017	1		04/09/19 04:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWC-24S **Lab ID: 2617035010** Collected: 04/04/19 12:20 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 00:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 00:18	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 00:18	7440-39-3	
Beryllium	**0.00015J**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 00:18	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 00:18	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 00:18	7440-43-9	
Calcium	**1.9**	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 00:18	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 00:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 00:18	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 00:18	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 00:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 00:18	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**63.0**	mg/L	25.0	10.0	1		04/11/19 19:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.9**	mg/L	0.25	0.024	1		04/09/19 04:36	16887-00-6	
Fluoride	**0.033J**	mg/L	0.30	0.029	1		04/09/19 04:36	16984-48-8	
Sulfate	**0.29J**	mg/L	1.0	0.017	1		04/09/19 04:36	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWC-33S **Lab ID: 2617035011** Collected: 04/04/19 11:35 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 00:30	7440-36-0	
Arsenic	**0.0024J**	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 00:30	7440-38-2	
Barium	**0.014**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 00:30	7440-39-3	
Beryllium	**0.025**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 00:30	7440-41-7	
Boron	**15.4**	mg/L	2.0	0.20	50	04/08/19 11:40	04/11/19 00:36	7440-42-8	
Cadmium	**0.0035**	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 00:30	7440-43-9	
Calcium	**163**	mg/L	25.0	0.69	50	04/08/19 11:40	04/11/19 00:36	7440-70-2	
Cobalt	**0.031**	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 00:30	7440-48-4	
Lead	**0.0014J**	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 00:30	7439-92-1	
Lithium	**0.035J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 00:30	7439-93-2	
Selenium	**0.012**	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 00:30	7782-49-2	
Thallium	**0.00018J**	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 00:30	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1260**	mg/L	25.0	10.0	1		04/11/19 19:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		04/09/19 05:18	16887-00-6	
Fluoride	**0.57**	mg/L	0.30	0.029	1		04/09/19 05:18	16984-48-8	
Sulfate	**847**	mg/L	50.0	0.85	50		04/09/19 10:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: YGWC-36 **Lab ID: 2617035012** Collected: 04/04/19 14:35 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0041**	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 00:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 00:53	7440-38-2	
Barium	**0.042**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 00:53	7440-39-3	
Beryllium	**0.00033J**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 00:53	7440-41-7	
Boron	**0.22**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 00:53	7440-42-8	
Cadmium	**0.00019J**	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 00:53	7440-43-9	
Calcium	**16.9J**	mg/L	25.0	0.69	50	04/08/19 11:40	04/11/19 00:58	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 00:53	7440-48-4	
Lead	**0.00037J**	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 00:53	7439-92-1	
Lithium	**0.0058J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 00:53	7439-93-2	
Selenium	**0.0029J**	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 00:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 00:53	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**240**	mg/L	25.0	10.0	1		04/11/19 19:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.4**	mg/L	0.25	0.024	1		04/09/19 05:38	16887-00-6	
Fluoride	**0.043J**	mg/L	0.30	0.029	1		04/09/19 05:38	16984-48-8	
Sulfate	**119**	mg/L	10.0	0.17	10		04/09/19 10:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: EB-1-4-3-19 **Lab ID: 2617035013** Collected: 04/03/19 11:00 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 01:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 01:04	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 01:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 01:04	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 01:04	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 01:04	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 01:04	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 01:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 01:04	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 01:04	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 01:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 01:04	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/10/19 16:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.27**	mg/L	0.25	0.024	1		04/09/19 05:59	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 05:59	16984-48-8	
Sulfate	**0.14J**	mg/L	1.0	0.017	1		04/09/19 05:59	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: EB-2-4-4-19 **Lab ID: 2617035014** Collected: 04/04/19 11:25 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 01:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 01:10	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 01:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 01:10	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 01:10	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 01:10	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 01:10	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 01:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 01:10	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 01:10	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 01:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 01:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/11/19 19:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.23J**	mg/L	0.25	0.024	1		04/09/19 06:20	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 06:20	16984-48-8	
Sulfate	**0.069J**	mg/L	1.0	0.017	1		04/09/19 06:20	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: Dup-1 **Lab ID: 2617035015** Collected: 04/03/19 00:00 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 01:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 01:16	7440-38-2	
Barium	**0.016**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 01:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 01:16	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 01:16	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 01:16	7440-43-9	
Calcium	**8.5**	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 01:16	7440-70-2	
Cobalt	**0.00078J**	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 01:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 01:16	7439-92-1	
Lithium	**0.014J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 01:16	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 01:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 01:16	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**81.0**	mg/L	25.0	10.0	1		04/10/19 16:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.6**	mg/L	0.25	0.024	1		04/09/19 06:41	16887-00-6	
Fluoride	**0.030J**	mg/L	0.30	0.029	1		04/09/19 06:41	16984-48-8	
Sulfate	**8.5**	mg/L	1.0	0.017	1		04/09/19 06:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: Dup-2 **Lab ID: 2617035016** Collected: 04/04/19 00:00 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 01:27	7440-36-0	
Arsenic	**0.0022J**	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 01:27	7440-38-2	
Barium	**0.012**	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 01:27	7440-39-3	
Beryllium	**0.023**	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 01:27	7440-41-7	
Boron	**9.0**	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 01:27	7440-42-8	
Cadmium	**0.0032**	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 01:27	7440-43-9	
Calcium	**145**	mg/L	25.0	0.69	50	04/08/19 11:40	04/11/19 01:33	7440-70-2	
Cobalt	**0.029**	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 01:27	7440-48-4	
Lead	**0.0013J**	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 01:27	7439-92-1	
Lithium	**0.033J**	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 01:27	7439-93-2	
Selenium	**0.011**	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 01:27	7782-49-2	
Thallium	**0.00017J**	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 01:27	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1320**	mg/L	25.0	10.0	1		04/11/19 19:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	0.25	0.024	1		04/09/19 07:02	16887-00-6	
Fluoride	**0.56**	mg/L	0.30	0.029	1		04/09/19 07:02	16984-48-8	
Sulfate	**735**	mg/L	50.0	0.85	50		04/12/19 05:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: FB-1-4-3-19 **Lab ID: 2617035017** Collected: 04/03/19 13:20 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 01:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 01:56	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 01:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 01:56	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 01:56	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 01:56	7440-43-9	
Calcium	**0.016J**	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 01:56	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 01:56	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 01:56	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 01:56	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 01:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 01:56	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/10/19 16:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.31**	mg/L	0.25	0.024	1		04/09/19 07:22	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 07:22	16984-48-8	
Sulfate	**3.5**	mg/L	1.0	0.017	1		04/09/19 07:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Sample: FB-2-4-4-19 **Lab ID: 2617035018** Collected: 04/04/19 13:25 Received: 04/04/19 17:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00078	1	04/08/19 11:40	04/11/19 02:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00057	1	04/08/19 11:40	04/11/19 02:01	7440-38-2	
Barium	ND	mg/L	0.010	0.00078	1	04/08/19 11:40	04/11/19 02:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000050	1	04/08/19 11:40	04/11/19 02:01	7440-41-7	
Boron	ND	mg/L	0.040	0.0039	1	04/08/19 11:40	04/11/19 02:01	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000093	1	04/08/19 11:40	04/11/19 02:01	7440-43-9	
Calcium	ND	mg/L	0.50	0.014	1	04/08/19 11:40	04/11/19 02:01	7440-70-2	
Cobalt	ND	mg/L	0.010	0.00052	1	04/08/19 11:40	04/11/19 02:01	7440-48-4	
Lead	ND	mg/L	0.0050	0.00027	1	04/08/19 11:40	04/11/19 02:01	7439-92-1	
Lithium	ND	mg/L	0.050	0.00097	1	04/08/19 11:40	04/11/19 02:01	7439-93-2	
Selenium	ND	mg/L	0.010	0.0014	1	04/08/19 11:40	04/11/19 02:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	04/08/19 11:40	04/11/19 02:01	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/11/19 19:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.10J**	mg/L	0.25	0.024	1		04/09/19 09:06	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/09/19 09:06	16984-48-8	
Sulfate	**0.033J**	mg/L	1.0	0.017	1		04/09/19 09:06	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

QC Batch: 25995 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2617035001, 2617035002, 2617035003, 2617035004, 2617035005, 2617035006, 2617035007, 2617035008, 2617035009, 2617035010, 2617035011, 2617035012, 2617035013, 2617035014, 2617035015, 2617035016, 2617035017, 2617035018

METHOD BLANK: 117356 Matrix: Water
Associated Lab Samples: 2617035001, 2617035002, 2617035003, 2617035004, 2617035005, 2617035006, 2617035007, 2617035008, 2617035009, 2617035010, 2617035011, 2617035012, 2617035013, 2617035014, 2617035015, 2617035016, 2617035017, 2617035018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/10/19 21:32	
Arsenic	mg/L	ND	0.0050	0.00057	04/10/19 21:32	
Barium	mg/L	ND	0.010	0.00078	04/10/19 21:32	
Beryllium	mg/L	ND	0.0030	0.000050	04/10/19 21:32	
Boron	mg/L	ND	0.040	0.0039	04/10/19 21:32	
Cadmium	mg/L	ND	0.0010	0.000093	04/10/19 21:32	
Calcium	mg/L	ND	0.50	0.014	04/10/19 21:32	
Cobalt	mg/L	ND	0.010	0.00052	04/10/19 21:32	
Lead	mg/L	ND	0.0050	0.00027	04/10/19 21:32	
Lithium	mg/L	ND	0.050	0.00097	04/10/19 21:32	
Selenium	mg/L	ND	0.010	0.0014	04/10/19 21:32	
Thallium	mg/L	ND	0.0010	0.00014	04/10/19 21:32	

LABORATORY CONTROL SAMPLE: 117357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	110	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.11	106	80-120	
Beryllium	mg/L	0.1	0.11	110	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	0.1	0.11	108	80-120	
Calcium	mg/L	1	1.0	102	80-120	
Cobalt	mg/L	0.1	0.10	105	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.11	109	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE SAMPLE: 117359

Parameter	Units	2617035001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	ND	0.1	0.11	110	75-125	
Arsenic	mg/L	ND	0.1	0.10	101	75-125	
Barium	mg/L	0.017	0.1	0.12	106	75-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

MATRIX SPIKE SAMPLE: 117359

Parameter	Units	2617035001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Beryllium	mg/L	ND	0.1	0.098	98	75-125	
Boron	mg/L	0.0055J	1	0.99	98	75-125	
Cadmium	mg/L	ND	0.1	0.11	106	75-125	
Calcium	mg/L	8.4	1	9.4	107	75-125	
Cobalt	mg/L	0.00083J	0.1	0.10	103	75-125	
Lead	mg/L	ND	0.1	0.10	102	75-125	
Lithium	mg/L	0.014J	0.1	0.11	100	75-125	
Selenium	mg/L	ND	0.1	0.10	101	75-125	
Thallium	mg/L	ND	0.1	0.10	101	75-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

QC Batch: 26059 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2617035004, 2617035008

LABORATORY CONTROL SAMPLE: 117667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	407	102	84-108	

SAMPLE DUPLICATE: 117668

Parameter	Units	2616931001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	540	670	21	10	D6

SAMPLE DUPLICATE: 117669

Parameter	Units	2617082006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	728	766	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

QC Batch: 26131 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2617035001, 2617035002, 2617035003, 2617035005, 2617035006, 2617035007, 2617035013, 2617035015, 2617035017

LABORATORY CONTROL SAMPLE: 117963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	408	102	84-108	

SAMPLE DUPLICATE: 117964

Parameter	Units	2617035001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	111	103	7	10	

SAMPLE DUPLICATE: 117965

Parameter	Units	2617076005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2180	2110	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

QC Batch: 26251 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2617035009, 2617035010, 2617035011, 2617035012, 2617035014, 2617035016, 2617035018

LABORATORY CONTROL SAMPLE: 118507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

SAMPLE DUPLICATE: 118508

Parameter	Units	2617035009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	85.0	50.0	52	10	D6

SAMPLE DUPLICATE: 118509

Parameter	Units	2617069003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	340	341	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

QC Batch: 25956 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2617035001, 2617035002, 2617035003, 2617035004, 2617035005, 2617035006, 2617035007, 2617035008, 2617035009, 2617035010, 2617035011, 2617035012, 2617035013, 2617035014, 2617035015, 2617035016, 2617035017, 2617035018

METHOD BLANK: 117263 Matrix: Water
Associated Lab Samples: 2617035001, 2617035002, 2617035003, 2617035004, 2617035005, 2617035006, 2617035007, 2617035008, 2617035009, 2617035010, 2617035011, 2617035012, 2617035013, 2617035014, 2617035015, 2617035016, 2617035017, 2617035018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.066J	0.25	0.024	04/08/19 22:43	
Fluoride	mg/L	ND	0.30	0.029	04/08/19 22:43	
Sulfate	mg/L	0.045J	1.0	0.017	04/08/19 22:43	

LABORATORY CONTROL SAMPLE: 117264

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.8	98	90-110	
Fluoride	mg/L	10	9.7	97	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 117265 117266

Parameter	Units	2617035001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	10	10	14.3	14.4	100	101	90-110	1	15	
Fluoride	mg/L	ND	10	10	9.7	9.8	97	98	90-110	1	15	
Sulfate	mg/L	8.5	10	10	17.6	17.7	91	92	90-110	0	15	

MATRIX SPIKE SAMPLE: 117267

Parameter	Units	2617035002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4.2	10	13.9	96	90-110	
Fluoride	mg/L	ND	10	9.3	93	90-110	
Sulfate	mg/L	2.1	10	11.2	91	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2617035001	YGWA-4I	EPA 3005A	25995	EPA 6020B	26012
2617035002	YGWA-5I	EPA 3005A	25995	EPA 6020B	26012
2617035003	YGWA-5D	EPA 3005A	25995	EPA 6020B	26012
2617035004	YGWA-17S	EPA 3005A	25995	EPA 6020B	26012
2617035005	YGWA-18S	EPA 3005A	25995	EPA 6020B	26012
2617035006	YGWA-18I	EPA 3005A	25995	EPA 6020B	26012
2617035007	YGWA-20S	EPA 3005A	25995	EPA 6020B	26012
2617035008	YGWA-21I	EPA 3005A	25995	EPA 6020B	26012
2617035009	YGWC-23S	EPA 3005A	25995	EPA 6020B	26012
2617035010	YGWC-24S	EPA 3005A	25995	EPA 6020B	26012
2617035011	YGWC-33S	EPA 3005A	25995	EPA 6020B	26012
2617035012	YGWC-36	EPA 3005A	25995	EPA 6020B	26012
2617035013	EB-1-4-3-19	EPA 3005A	25995	EPA 6020B	26012
2617035014	EB-2-4-4-19	EPA 3005A	25995	EPA 6020B	26012
2617035015	Dup-1	EPA 3005A	25995	EPA 6020B	26012
2617035016	Dup-2	EPA 3005A	25995	EPA 6020B	26012
2617035017	FB-1-4-3-19	EPA 3005A	25995	EPA 6020B	26012
2617035018	FB-2-4-4-19	EPA 3005A	25995	EPA 6020B	26012
2617035001	YGWA-4I	SM 2540C	26131		
2617035002	YGWA-5I	SM 2540C	26131		
2617035003	YGWA-5D	SM 2540C	26131		
2617035004	YGWA-17S	SM 2540C	26059		
2617035005	YGWA-18S	SM 2540C	26131		
2617035006	YGWA-18I	SM 2540C	26131		
2617035007	YGWA-20S	SM 2540C	26131		
2617035008	YGWA-21I	SM 2540C	26059		
2617035009	YGWC-23S	SM 2540C	26251		
2617035010	YGWC-24S	SM 2540C	26251		
2617035011	YGWC-33S	SM 2540C	26251		
2617035012	YGWC-36	SM 2540C	26251		
2617035013	EB-1-4-3-19	SM 2540C	26131		
2617035014	EB-2-4-4-19	SM 2540C	26251		
2617035015	Dup-1	SM 2540C	26131		
2617035016	Dup-2	SM 2540C	26251		
2617035017	FB-1-4-3-19	SM 2540C	26131		
2617035018	FB-2-4-4-19	SM 2540C	26251		
2617035001	YGWA-4I	EPA 300.0	25956		
2617035002	YGWA-5I	EPA 300.0	25956		
2617035003	YGWA-5D	EPA 300.0	25956		
2617035004	YGWA-17S	EPA 300.0	25956		
2617035005	YGWA-18S	EPA 300.0	25956		
2617035006	YGWA-18I	EPA 300.0	25956		
2617035007	YGWA-20S	EPA 300.0	25956		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617035

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2617035008	**YGWA-21I**	EPA 300.0	25956		
2617035009	**YGWC-23S**	EPA 300.0	25956		
2617035010	**YGWC-24S**	EPA 300.0	25956		
2617035011	**YGWC-33S**	EPA 300.0	25956		
2617035012	**YGWC-36**	EPA 300.0	25956		
2617035013	**EB-1-4-3-19**	EPA 300.0	25956		
2617035014	**EB-2-4-4-19**	EPA 300.0	25956		
2617035015	**Dup-1**	EPA 300.0	25956		
2617035016	**Dup-2**	EPA 300.0	25956		
2617035017	**FB-1-4-3-19**	EPA 300.0	25956		
2617035018	**FB-2-4-4-19**	EPA 300.0	25956		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
~~Atlanta, GA 30308~~
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P		P	
					PRESERVATION:		3	7		3	
4-3-19	1350	GW		✓	YGWA-4I	4	✓	✓	✓	✓	
4-3-19	1540	GW		✓	YGWA-5I	4	✓	✓	✓	✓	
4-3-19	1355	GW		✓	YGWA-5D	4	✓	✓	✓	✓	
4-2-19	1510	GW		✓	YGWA-17S	4	✓	✓	✓	✓	
4-3-19	1015	GW		✓	YGWA-18S	4	✓	✓	✓	✓	
4-3-19	1135	GW		✓	YGWA-18I	4	✓	✓	✓	✓	
4-3-19	1230	GW		✓	YGWA-20S	4	✓	✓	✓	✓	
4-2-19	1556	GW		✓	YGWA-21I	4	✓	✓	✓	✓	
4-4-19	1305	GW		✓	YGWC-23S	4	✓	✓	✓	✓	
4-4-19	1220	GW		✓	YGWC-24S	4	✓	✓	✓	✓	
4-4-19	1135	GW		✓	YGWC-33S	4	✓	✓	✓	✓	
4-4-19	1435	GW		✓	YGWC-36	6	✓	✓	✓	✓	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - ~~VOA VIAL~~; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - ~~NaOH, ≤6°C~~; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION: APP III plus detected APP IV

WO#: 2617035

2617035

Extra Rad here

SAMPLED BY AND TITLE: C. Parker, H. Auld | DATE/TIME: See above | RELINQUISHED BY: | DATE/TIME: 4-4-19 / 1722

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

RECEIVED BY/LAB: M Zalman | DATE/TIME: 04/04/19 1722 | SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH Checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 0.5 Max: | Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

CHAIN OF CUSTODY RECORD

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CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
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Atlanta, GA 30308
404-508-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:							P	P		P	
PRESERVATION:							3	7		3	
4-3-19	1100	W		✓	EB-1-4-3-19	4	✓	✓	✓	✓	
4-4-19	1125	W		✓	EB-2-4-4-19	4	✓	✓	✓	✓	
4-3-19	—	GW		✓	Dup-1	4	✓	✓	✓	✓	
4-4-19	—	GW		✓	Dup-2	4	✓	✓	✓	✓	
4-3-19	1320	W		✓	FB-1-4-3-19	4	✓	✓	✓	✓	
4-4-19	1325	W		✓	FB-2-4-4-19	4	✓	✓	✓	✓	

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO#: 2617035

PM: BM Due Date: 04/12/19

CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: C. Parker, H. Auld

DATE/TIME: see above

RELINQUISHED BY:

DATE/TIME: 4-4-19 1722

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB: M Zalman

DATE/TIME: 04/04/19 1722

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min: 0.5 Max:

Custody Seal: Intact Broken Not Present

# of Coolers:

Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO# : 2617035

PM: BM Due Date: 04/12/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 4/4/19 MR

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☑No ☐N/A	10. See Comment
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No ☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution: 1 Radium container for YGWC-24S arrived to the lab with a very limited sample vol. secondary to lid not being closed tight.

Project Manager Review: **Date:**

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 29, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2617037001	**YGWA-4I**	Water	04/03/19 13:50	04/04/19 17:22
2617037002	**YGWA-5I**	Water	04/03/19 15:40	04/04/19 17:22
2617037003	**YGWA-5D**	Water	04/03/19 13:55	04/04/19 17:22
2617037004	**YGWA-17S**	Water	04/02/19 15:10	04/04/19 17:22
2617037005	**YGWA-18S**	Water	04/03/19 10:15	04/04/19 17:22
2617037006	**YGWA-18I**	Water	04/03/19 11:35	04/04/19 17:22
2617037007	**YGWA-20S**	Water	04/03/19 12:30	04/04/19 17:22
2617037008	**YGWA-21I**	Water	04/02/19 15:56	04/04/19 17:22
2617037009	**YGWC-23S**	Water	04/04/19 13:05	04/04/19 17:22
2617037011	**YGWC-33S**	Water	04/04/19 11:35	04/04/19 17:22
2617037012	**YGWC-36**	Water	04/04/19 14:35	04/04/19 17:22
2617037013	**EB-1-4-3-19**	Water	04/03/19 11:00	04/04/19 17:22
2617037014	**EB-2-4-4-19**	Water	04/04/19 11:25	04/04/19 17:22
2617037015	**Dup-1**	Water	04/03/19 00:00	04/04/19 17:22
2617037016	**Dup-2**	Water	04/04/19 00:00	04/04/19 17:22
2617037017	**FB-1-4-3-19**	Water	04/03/19 13:20	04/04/19 17:22
2617037018	**FB-2-4-4-19**	Water	04/04/19 13:25	04/04/19 17:22

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2617037001	YGWA-4I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037002	YGWA-5I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037003	YGWA-5D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037004	YGWA-17S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037005	YGWA-18S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037006	YGWA-18I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037007	YGWA-20S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037008	YGWA-21I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037009	YGWC-23S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037011	YGWC-33S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037012	YGWC-36	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037013	EB-1-4-3-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037014	EB-2-4-4-19	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037015	**Dup-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037016	**Dup-2**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037017	**FB-1-4-3-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2617037018	**FB-2-4-4-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-4I **Lab ID: 2617037001** Collected: 04/03/19 13:50 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.956 ± 0.433 (0.582) C:96% T:NA**	pCi/L	04/17/19 09:02	13982-63-3	
Radium-228	EPA 9320	**0.111 ± 0.339 (0.762) C:85% T:80%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.07 ± 0.772 (1.34)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-5I **Lab ID: 2617037002** Collected: 04/03/19 15:40 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.294 ± 0.225 (0.342) C:102% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.136 ± 0.397 (0.886) C:86% T:78%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**0.430 ± 0.622 (1.23)**	pCi/L	04/22/19 11:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-5D **Lab ID: 2617037003** Collected: 04/03/19 13:55 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**3.23 ± 0.801 (0.382) C:97% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**1.56 ± 0.525 (0.732) C:84% T:82%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**4.79 ± 1.33 (1.11)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-17S **Lab ID: 2617037004** Collected: 04/02/19 15:10 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.306 ± 0.213 (0.295) C:102% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.541 ± 0.415 (0.820) C:72% T:81%**	pCi/L	04/18/19 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.847 ± 0.628 (1.12)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-18S **Lab ID: 2617037005** Collected: 04/03/19 10:15 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.182 ± 0.200 (0.386) C:97% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.247 ± 0.296 (0.626) C:81% T:92%**	pCi/L	04/18/19 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.429 ± 0.496 (1.01)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-18I **Lab ID: 2617037006** Collected: 04/03/19 11:35 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.385 ± 0.266 (0.419) C:98% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**-0.0186 ± 0.267 (0.636) C:80% T:76%**	pCi/L	04/18/19 14:53	15262-20-1	
Total Radium	Total Radium Calculation	**0.385 ± 0.533 (1.06)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-20S **Lab ID: 2617037007** Collected: 04/03/19 12:30 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.320 ± 0.218 (0.305) C:112% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.685 ± 0.361 (0.625) C:76% T:82%**	pCi/L	04/18/19 14:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.01 ± 0.579 (0.930)**	pCi/L	04/22/19 11:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWA-21I **Lab ID: 2617037008** Collected: 04/02/19 15:56 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.670 ± 0.333 (0.396) C:91% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.752 ± 0.391 (0.687) C:80% T:79%**	pCi/L	04/18/19 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.42 ± 0.724 (1.08)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWC-23S **Lab ID: 2617037009** Collected: 04/04/19 13:05 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.0780 ± 0.159 (0.370) C:91% T:NA**	pCi/L	04/18/19 09:01	13982-63-3	
Radium-228	EPA 9320	**0.396 ± 0.357 (0.723) C:87% T:74%**	pCi/L	04/18/19 15:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.474 ± 0.516 (1.09)**	pCi/L	04/22/19 11:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWC-33S **Lab ID: 2617037011** Collected: 04/04/19 11:35 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.558 ± 0.231 (0.255) C:100% T:NA**	pCi/L	04/16/19 21:13	13982-63-3	
Radium-228	EPA 9320	**0.578 ± 0.372 (0.704) C:85% T:81%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.14 ± 0.603 (0.959)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: YGWC-36 **Lab ID: 2617037012** Collected: 04/04/19 14:35 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.484 ± 0.287 (0.376) C:91% T:NA**	pCi/L	04/18/19 09:01	13982-63-3	
Radium-228	EPA 9320	**0.569 ± 0.439 (0.878) C:83% T:81%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.05 ± 0.726 (1.25)**	pCi/L	04/22/19 11:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: EB-1-4-3-19 **Lab ID: 2617037013** Collected: 04/03/19 11:00 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.280 ± 0.225 (0.349) C:84% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**-0.0998 ± 0.290 (0.703) C:78% T:79%**	pCi/L	04/18/19 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**0.280 ± 0.515 (1.05)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: EB-2-4-4-19 **Lab ID: 2617037014** Collected: 04/04/19 11:25 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.240 ± 0.170 (0.276) C:97% T:NA**	pCi/L	04/16/19 21:13	13982-63-3	
Radium-228	EPA 9320	**0.461 ± 0.372 (0.743) C:88% T:78%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**0.701 ± 0.542 (1.02)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: Dup-1 **Lab ID: 2617037015** Collected: 04/03/19 00:00 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.899 ± 0.397 (0.447) C:88% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.358 ± 0.307 (0.614) C:81% T:83%**	pCi/L	04/18/19 14:52	15262-20-1	
Total Radium	Total Radium Calculation	**1.26 ± 0.704 (1.06)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: Dup-2 **Lab ID: 2617037016** Collected: 04/04/19 00:00 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.753 ± 0.334 (0.332) C:101% T:NA**	pCi/L	04/17/19 08:23	13982-63-3	
Radium-228	EPA 9320	**0.278 ± 0.368 (0.785) C:86% T:80%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.03 ± 0.702 (1.12)**	pCi/L	04/22/19 11:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: FB-1-4-3-19 **Lab ID: 2617037017** Collected: 04/03/19 13:20 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.138 ± 0.190 (0.398) C:96% T:NA**	pCi/L	04/17/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.366 ± 0.336 (0.680) C:80% T:77%**	pCi/L	04/18/19 14:53	15262-20-1	
Total Radium	Total Radium Calculation	**0.504 ± 0.526 (1.08)**	pCi/L	04/22/19 11:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Sample: FB-2-4-4-19 **Lab ID: 2617037018** Collected: 04/04/19 13:25 Received: 04/04/19 17:22 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.288 ± 0.236 (0.391) C:87% T:NA**	pCi/L	04/18/19 09:01	13982-63-3	
Radium-228	EPA 9320	**0.0312 ± 0.316 (0.727) C:86% T:81%**	pCi/L	04/18/19 15:36	15262-20-1	
Total Radium	Total Radium Calculation	**0.319 ± 0.552 (1.12)**	pCi/L	04/22/19 11:25	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

QC Batch: 337921 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2617037009, 2617037012, 2617037018

METHOD BLANK: 1644534 Matrix: Water
Associated Lab Samples: 2617037009, 2617037012, 2617037018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.156 ± 0.184 (0.361) C:97% T:NA	pCi/L	04/18/19 09:01	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

QC Batch: 337919 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2617037001, 2617037002, 2617037003, 2617037004, 2617037005, 2617037006, 2617037007, 2617037008, 2617037011, 2617037013, 2617037014, 2617037015, 2617037016, 2617037017

METHOD BLANK: 1644532 Matrix: Water
Associated Lab Samples: 2617037001, 2617037002, 2617037003, 2617037004, 2617037005, 2617037006, 2617037007, 2617037008, 2617037011, 2617037013, 2617037014, 2617037015, 2617037016, 2617037017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.211 ± 0.257 (0.538) C:93% T:NA	pCi/L	04/17/19 07:57	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

QC Batch: 337912 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2617037001, 2617037002, 2617037003, 2617037004, 2617037005, 2617037006, 2617037007, 2617037008, 2617037011, 2617037013, 2617037014, 2617037015, 2617037016, 2617037017

METHOD BLANK: 1644522 Matrix: Water
Associated Lab Samples: 2617037001, 2617037002, 2617037003, 2617037004, 2617037005, 2617037006, 2617037007, 2617037008, 2617037011, 2617037013, 2617037014, 2617037015, 2617037016, 2617037017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.129 ± 0.341 (0.763) C:81% T:73%	pCi/L	04/18/19 11:47	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

QC Batch: 337913 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2617037009, 2617037012, 2617037018

METHOD BLANK: 1644523 Matrix: Water
Associated Lab Samples: 2617037009, 2617037012, 2617037018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.226 ± 0.293 (0.621) C:88% T:75%	pCi/L	04/18/19 15:38	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2617037001	YGWA-4I	EPA 9315	337919		
2617037002	YGWA-5I	EPA 9315	337919		
2617037003	YGWA-5D	EPA 9315	337919		
2617037004	YGWA-17S	EPA 9315	337919		
2617037005	YGWA-18S	EPA 9315	337919		
2617037006	YGWA-18I	EPA 9315	337919		
2617037007	YGWA-20S	EPA 9315	337919		
2617037008	YGWA-21I	EPA 9315	337919		
2617037009	YGWC-23S	EPA 9315	337921		
2617037011	YGWC-33S	EPA 9315	337919		
2617037012	YGWC-36	EPA 9315	337921		
2617037013	EB-1-4-3-19	EPA 9315	337919		
2617037014	EB-2-4-4-19	EPA 9315	337919		
2617037015	Dup-1	EPA 9315	337919		
2617037016	Dup-2	EPA 9315	337919		
2617037017	FB-1-4-3-19	EPA 9315	337919		
2617037018	FB-2-4-4-19	EPA 9315	337921		
2617037001	YGWA-4I	EPA 9320	337912		
2617037002	YGWA-5I	EPA 9320	337912		
2617037003	YGWA-5D	EPA 9320	337912		
2617037004	YGWA-17S	EPA 9320	337912		
2617037005	YGWA-18S	EPA 9320	337912		
2617037006	YGWA-18I	EPA 9320	337912		
2617037007	YGWA-20S	EPA 9320	337912		
2617037008	YGWA-21I	EPA 9320	337912		
2617037009	YGWC-23S	EPA 9320	337913		
2617037011	YGWC-33S	EPA 9320	337912		
2617037012	YGWC-36	EPA 9320	337913		
2617037013	EB-1-4-3-19	EPA 9320	337912		
2617037014	EB-2-4-4-19	EPA 9320	337912		
2617037015	Dup-1	EPA 9320	337912		
2617037016	Dup-2	EPA 9320	337912		
2617037017	FB-1-4-3-19	EPA 9320	337912		
2617037018	FB-2-4-4-19	EPA 9320	337913		
2617037001	YGWA-4I	Total Radium Calculation	339291		
2617037002	YGWA-5I	Total Radium Calculation	339291		
2617037003	YGWA-5D	Total Radium Calculation	339291		
2617037004	YGWA-17S	Total Radium Calculation	339291		
2617037005	YGWA-18S	Total Radium Calculation	339291		
2617037006	YGWA-18I	Total Radium Calculation	339291		
2617037007	YGWA-20S	Total Radium Calculation	339291		
2617037008	YGWA-21I	Total Radium Calculation	339291		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond 3
Pace Project No.: 2617037

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2617037009	**YGWC-23S**	Total Radium Calculation	339292		
2617037011	**YGWC-33S**	Total Radium Calculation	339291		
2617037012	**YGWC-36**	Total Radium Calculation	339292		
2617037013	**EB-1-4-3-19**	Total Radium Calculation	339291		
2617037014	**EB-2-4-4-19**	Total Radium Calculation	339291		
2617037015	**Dup-1**	Total Radium Calculation	339291		
2617037016	**Dup-2**	Total Radium Calculation	339291		
2617037017	**FB-1-4-3-19**	Total Radium Calculation	339291		
2617037018	**FB-2-4-4-19**	Total Radium Calculation	339292		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:							P	P		P	
PRESERVATION:							3	7		3	
4-3-19	1350	GW		✓	YGWA-4I	4	✓	✓	✓	✓	
4-3-19	1540	GW		✓	YGWA-5I	4	✓	✓	✓	✓	
4-3-19	1355	GW		✓	YGWA-5D	4	✓	✓	✓	✓	
4-2-19	1510	GW		✓	YGWA-17S	4	✓	✓	✓	✓	
4-3-19	1015	GW		✓	YGWA-18S	4	✓	✓	✓	✓	
4-3-19	1135	GW		✓	YGWA-18I	4	✓	✓	✓	✓	
4-3-19	1230	GW		✓	YGWA-20S	4	✓	✓	✓	✓	
4-2-19	1556	GW		✓	YGWA-21I	4	✓	✓	✓	✓	
4-4-19	1305	GW		✓	YGWC-23S	4	✓	✓	✓	✓	
4-4-19	1220	GW		✓	YGWC-24S	4	✓	✓	✓	✓	
4-4-19	1135	GW		✓	YGWC-33S	4	✓	✓	✓	✓	
4-4-19	1435	GW		✓	YGWC-36	6	✓	✓	✓	✓	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO#: 2617037

2617037

Extra Rad here

SAMPLED BY AND TITLE: C. Parker, H. Auld

DATE/TIME: See above

RELINQUISHED BY:

DATE/TIME: 4-4-19 / 1722

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY/LAB: M Dahman

DATE/TIME: 04/04/19 1722

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min: 0.5 Max:

Custody Seal: Intact Broken Not Present

# of Coolers

Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

Yates Ash Pond 3 - Blank COCs.xlsx

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO_4, & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)
	CONTAINER TYPE:						P	P		P
	PRESERVATION:						3	7		3
4-3-19	1100	W		✓	EB-1-4-3-19	4	✓	✓	✓	✓
4-4-19	1125	W		✓	EB-2-4.4-19	4	✓	✓	✓	✓
4-3-19	—	GW		✓	DUP-1	4	✓	✓	✓	✓
4-4-19	—	GW		✓	DUP-2	4	✓	✓	✓	✓
4-3-19	1320	W		✓	FB-1-4-3-19	4	✓	✓	✓	✓
4-4-19	1325	W		✓	FB-2-4-4-19	4	✓	✓	✓	✓

LAB ID NUMBER

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO#: 2617037

PM: BM Due Date: 05/03/19

CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: C. Parker, M. Auld — DATE/TIME: see above

RELINQUISHED BY: — DATE/TIME: 4-4-19 1722

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: Zalman — DATE/TIME: 04/04/19 1722

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA — Ice: Yes No NA — Temperature: Min: 2.5 Max:

Custody Seal: Intact Broken Not Present — # of Coolers — Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2617037

PM: BM Due Date: 05/03/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.5 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/4/19 MA

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☑No ☐N/A	10. see comment
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed: Lot # of added preservative:
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Evan Perry Date/Time: 4/5/2019 12:58

Comments/ Resolution: 1 Radium container for YGWC-245 arrived to the lab with a very limited sample vol. secondary to lid not being closed tight.

Per consultant, cancel YCWC-245. It will be resampled.

Project Manager Review: BMcD **Date:** 4/5/2019

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

May 01, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on April 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2617220001	**YGWC-24S**	Water	04/09/19 12:05	04/10/19 08:40

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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2617220001	**YGWC-24S**	EPA 9315	JJY	1	PASI-PA
		EPA 9320	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

Sample: YGWC-24S **Lab ID: 2617220001** Collected: 04/09/19 12:05 Received: 04/10/19 08:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.282 ± 0.130 (0.193) C:91% T:NA**	pCi/L	04/22/19 21:19	13982-63-3	
Radium-228	EPA 9320	**0.220 ± 0.301 (0.643) C:80% T:82%**	pCi/L	04/25/19 14:16	15262-20-1	
Total Radium	Total Radium Calculation	**0.502 ± 0.431 (0.836)**	pCi/L	04/26/19 09:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

QC Batch: 338631 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2617220001

METHOD BLANK: 1648339 Matrix: Water
Associated Lab Samples: 2617220001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.146 ± 0.0893 (0.139) C:90% T:NA	pCi/L	04/22/19 21:19	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

QC Batch: 338745 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2617220001

METHOD BLANK: 1648702 Matrix: Water
Associated Lab Samples: 2617220001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.552 ± 0.362 (0.681) C:81% T:74%	pCi/L	04/25/19 11:04	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2617220

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2617220001	**YGWC-24S**	EPA 9315	338631		
2617220001	**YGWC-24S**	EPA 9320	338745		
2617220001	**YGWC-24S**	Total Radium Calculation	340066		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: _____ OF _____

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:							P	P		P	
PRESERVATION:							3	7		3	
4-9-19	1205	GW		✓	YBWC-245	2				2	

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO# : 2617220

2617220

SAMPLED BY AND TITLE: [signature] A.C. — DATE/TIME: 4-9-19 1205

RELINQUISHED BY: [signature] — DATE/TIME: 4-10-19 0840

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY/LAB: [signature] — DATE/TIME: 04/10/19 0840

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA — Ice: Yes No NA — Temperature: Min: 1.0 Max:

Custody Seal: Intact Broken Not Present — # of Coolers: — Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

Yates Ash Pond 3 - Blank COCs

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2617220

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

PM: BM Due Date: 05/08/19

CLIENT: GAPower-CCR

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.0 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 4/10/19 MK

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:	W	
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

F-ALLC003rev.3, 11September2006

Product Name: Low-Flow System

Date: 2019-04-03 13:46:50

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWA-4I	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.9676365 L
Well Total Depth	49.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12 in
Depth to Water	19.22 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:23:47	1199.99	18.45	6.44	163.72	8.90	20.20	1.55	137.30
Last 5	13:28:47	1499.99	18.18	6.44	164.28	7.13	20.20	1.37	136.60
Last 5	13:33:47	1799.98	18.10	6.43	163.92	5.78	20.20	1.32	136.87
Last 5	13:38:47	2099.97	17.87	6.43	163.39	5.05	20.20	1.32	137.22
Last 5	13:43:47	2399.96	17.76	6.43	162.51	4.64	20.20	1.30	136.76
Variance 0			-0.08	-0.00	-0.36			-0.04	0.28
Variance 1			-0.23	-0.00	-0.53			-0.01	0.34
Variance 2			-0.11	0.00	-0.88			-0.02	-0.45

Notes

Sampled at 13:50. Sunny 60s. DUP 1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 13:51:50

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates AP3	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	83 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	106 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5D	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	1.286177 L
Well Total Depth	131.60 ft	Calculated Sample Rate	300 sec
Screen Length	50 ft	Stabilization Drawdown	5 in
Depth to Water	22.43 ft	Total Volume Pumped	5.4 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	13:30:10	1200.01	16.95	7.01	241.54	2.60	22.85	0.97	-134.54
Last 5	13:35:10	1500.04	16.94	7.07	229.76	2.90	22.85	0.75	-123.00
Last 5	13:40:10	1800.01	16.88	7.08	226.93	2.70	22.85	0.41	-117.08
Last 5	13:45:10	2100.02	16.94	7.09	224.20	3.10	22.85	0.28	-113.43
Last 5	13:50:15	2405.02	16.96	7.11	222.12	3.00	22.85	0.24	-109.98
Variance 0			-0.07	0.01	-2.83			-0.34	5.93
Variance 1			0.06	0.01	-2.73			-0.13	3.65
Variance 2			0.02	0.02	-2.08			-0.04	3.45

Notes

Sampled at 1555 on 4-3-19. Sunny, 60s. FB-1-4-3-19 here at 1320.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 15:40:17

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates AP3	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	59 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	53 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.054511 L
Well Total Depth	58.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.2 in
Depth to Water	15.78 ft	Total Volume Pumped	5.3 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	15:16:39	600.05	16.96	5.95	90.18	3.70	16.05	6.32	119.12
Last 5	15:21:39	900.02	16.87	5.75	90.48	3.50	16.05	6.22	122.89
Last 5	15:26:40	1201.01	16.83	5.65	90.38	3.10	16.05	6.15	125.31
Last 5	15:31:40	1501.04	16.92	5.66	90.45	4.10	16.05	6.14	123.17
Last 5	15:36:40	1801.00	16.87	5.63	91.01	4.10	16.05	6.10	123.00
Variance 0			-0.04	-0.09	-0.10			-0.07	2.42
Variance 1			0.09	0.00	0.07			-0.01	-2.14
Variance 2			-0.04	-0.02	0.56			-0.04	-0.17

Notes

Sampled at 1540 on 4-3-19. Sunny, 70.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-02 15:09:20

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	39 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	34 ft

Well Information:		Pumping Information:	
Well ID	YGWA-17S	Final Pumping Rate	210 mL/min
Well diameter	2 in	Total System Volume	0.8614565 L
Well Total Depth	39.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	11.35 ft	Total Volume Pumped	12.6 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:42:20	1799.98	17.36	5.75	80.80	7.64	11.80	1.53	183.09
Last 5	14:47:20	2099.97	17.47	5.74	80.80	6.86	11.80	1.51	183.82
Last 5	14:52:20	2399.96	17.36	5.74	80.88	5.59	11.80	1.51	184.44
Last 5	14:57:21	2700.95	17.31	5.74	81.03	4.96	11.80	1.49	184.92
Last 5	15:02:21	3000.94	17.36	5.74	81.13	4.81	11.80	1.49	185.18
Variance 0			-0.11	-0.01	0.09			-0.00	0.62
Variance 1			-0.05	0.00	0.15			-0.02	0.49
Variance 2			0.05	-0.00	0.10			-0.01	0.26

Notes

Sampled at 15:10. Sunny 60s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 11:32:39

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	79.67 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	21.03 ft	Total Volume Pumped	6.8 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:09:04	900.00	15.82	6.28	119.15	6.38	21.20	3.90	159.26
Last 5	11:14:04	1199.99	15.97	6.27	118.99	5.49	21.20	3.83	160.66
Last 5	11:19:04	1499.99	16.04	6.29	118.78	5.11	21.20	3.66	161.44
Last 5	11:24:04	1799.98	16.11	6.28	119.00	4.98	21.20	3.55	163.24
Last 5	11:29:04	2099.97	16.16	6.29	119.21	4.87	21.20	3.50	163.11
Variance 0			0.06	0.01	-0.22			-0.17	0.77
Variance 1			0.07	-0.01	0.22			-0.11	1.80
Variance 2			0.05	0.01	0.21			-0.05	-0.13

Notes

Sampled at 11:35. Sunny 60s

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 10:15:10

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18S	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.86 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	17.42 ft	Total Volume Pumped	9.1 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	09:53:05	600.01	14.03	5.64	61.36	4.46	18.20	4.19	212.28
Last 5	09:58:05	900.04	14.13	5.50	61.00	3.92	18.20	4.09	216.56
Last 5	10:03:05	1200.00	14.20	5.49	60.81	3.66	18.20	4.07	216.09
Last 5	10:08:05	1499.98	14.24	5.48	60.86	3.15	18.20	4.02	215.80
Last 5	10:13:05	1799.98	14.35	5.47	60.74	3.58	18.20	4.01	215.41
Variance 0			0.07	-0.01	-0.19			-0.02	-0.48
Variance 1			0.04	-0.01	0.05			-0.05	-0.28
Variance 2			0.11	-0.01	-0.12			-0.01	-0.39

Notes

Sampled at 10:15. Sunny 50s

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 12:32:31

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates AP3	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	24 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	18 ft

Well Information:		Pumping Information:	
Well ID	YGWA-20S	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.7166655 L
Well Total Depth	23.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	11.05 ft	Total Volume Pumped	12.4 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	12:07:06	4799.97	16.56	5.72	62.43	6.30	11.55	5.78	154.52
Last 5	12:12:06	5099.94	16.69	5.71	62.36	5.60	11.55	5.77	165.69
Last 5	12:17:06	5399.93	16.74	5.67	62.29	5.60	11.55	5.73	175.88
Last 5	12:22:06	5699.96	17.13	5.72	62.19	5.20	11.55	5.74	194.05
Last 5	12:27:06	5999.94	17.29	5.71	62.24	4.85	11.55	5.74	223.44
Variance 0			0.06	-0.03	-0.08			-0.04	10.18
Variance 1			0.39	0.05	-0.10			0.01	18.18
Variance 2			0.16	-0.01	0.05			0.00	29.39

Notes

Sampled at 1230 on 4-3-19. Sunny, 60. EB-1-4-3-19 here at 1100.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-02 15:56:13

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates AP3	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-21I	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.07 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	4 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	15:34:24	900.04	17.72	6.77	212.59	0.50	--	0.74	-107.24
Last 5	15:39:24	1200.03	18.03	6.85	211.08	0.50	--	0.68	-106.44
Last 5	15:44:24	1500.03	18.12	6.89	206.74	0.40	--	0.45	-102.50
Last 5	15:49:24	1800.02	18.26	6.90	203.26	0.50	--	0.30	-99.61
Last 5	15:54:24	2100.02	17.64	6.94	202.66	0.50	--	0.25	-97.69
Variance 0			0.09	0.04	-4.34			-0.23	3.94
Variance 1			0.13	0.01	-3.48			-0.15	2.89
Variance 2			-0.62	0.03	-0.60			-0.04	1.92

Notes

Sampled at 1556 on 4-2-19. Sunny, 60.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 13:07:03

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates AP3	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	34 ft

Well Information:		Pumping Information:	
Well ID	YGWC-23S	Final Pumping Rate	220 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.18 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	7.7 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	12:42:59	600.03	18.30	5.58	89.55	33.00	--	8.23	147.05
Last 5	12:47:59	900.02	18.24	5.61	89.14	16.00	--	8.21	151.23
Last 5	12:52:59	1200.02	18.17	5.59	88.85	12.00	--	8.22	149.94
Last 5	12:57:59	1500.02	18.15	5.62	88.68	6.90	--	8.24	145.87
Last 5	13:02:59	1800.02	18.07	5.64	87.88	4.80	--	8.23	146.91
Variance 0			-0.07	-0.02	-0.29			0.01	-1.28
Variance 1			-0.02	0.02	-0.18			0.03	-4.08
Variance 2			-0.08	0.02	-0.80			-0.01	1.04

Notes

Sampled at 1305 on 4-4-19. Cloudy, 70s. FB-2-4-4-19 here at 1325.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 12:18:44

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	57 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	52 ft

Well Information:		Pumping Information:	
Well ID	YGWC-24S	Final Pumping Rate	210 mL/min
Well diameter	2 in	Total System Volume	1.035206 L
Well Total Depth	57.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	26.92 ft	Total Volume Pumped	8.4 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:54:12	600.01	17.90	6.01	65.65	3.11	27.50	6.53	183.53
Last 5	11:59:12	900.00	17.95	5.78	65.33	3.98	27.60	6.34	189.08
Last 5	12:04:12	1199.99	17.90	5.72	65.27	3.40	27.60	6.33	197.22
Last 5	12:09:12	1499.98	17.94	5.67	65.35	3.07	27.60	6.35	192.49
Last 5	12:14:12	1799.97	17.98	5.66	65.36	2.94	27.60	6.37	192.64
Variance 0			-0.05	-0.06	-0.06			-0.00	8.14
Variance 1			0.04	-0.05	0.08			0.01	-4.73
Variance 2			0.04	-0.01	0.02			0.02	0.15

Notes

Sampled at 12:20. Cloudy 60s. EB 2 here at 11:25 - gloves.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-09 12:04:27

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	57 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	52 ft

Well Information:		Pumping Information:	
Well ID	YGWC-24S	Final Pumping Rate	190 mL/min
Well diameter	2 in	Total System Volume	1.035206 L
Well Total Depth	57.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5 in
Depth to Water	26.95 ft	Total Volume Pumped	7.6 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:38:47	600.01	18.66	6.00	62.31	0.86	27.30	6.66	185.58
Last 5	11:43:47	900.00	18.85	5.81	61.94	1.02	27.30	6.61	189.12
Last 5	11:48:47	1199.99	18.74	5.74	61.84	0.88	27.30	6.49	190.64
Last 5	11:53:47	1499.98	18.81	5.69	61.98	1.09	27.30	6.39	191.74
Last 5	11:58:47	1799.98	19.06	5.69	61.91	1.01	27.30	6.41	192.44
Variance 0			-0.11	-0.07	-0.10			-0.12	1.52
Variance 1			0.07	-0.05	0.14			-0.09	1.10
Variance 2			0.25	-0.00	-0.07			0.01	0.70

Notes

Sampled at 12:05. Cloudy 60s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 11:33:09

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates AP3	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	39 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	33 ft

Well Information:		Pumping Information:	
Well ID	YGWC-33S	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8614565 L
Well Total Depth	38.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	11:12:15	900.02	18.79	3.87	1357.11	12.10	--	0.24	280.88
Last 5	11:17:15	1200.02	18.76	3.86	1359.06	8.90	--	0.20	279.20
Last 5	11:22:15	1500.01	18.74	3.87	1356.92	6.40	--	0.18	274.01
Last 5	11:27:15	1800.01	18.73	3.88	1355.84	5.50	--	0.18	270.61
Last 5	11:32:15	2100.00	18.73	3.88	1354.35	4.90	--	0.17	268.24
Variance 0			-0.02	0.01	-2.13			-0.02	-5.20
Variance 1			-0.02	0.00	-1.08			0.00	-3.40
Variance 2			0.01	0.00	-1.49			-0.01	-2.36

Notes

Sampled at 1135 on 4-4-19. Cloudy, 70. Dup-2 here. Transducer in well, no WL.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 14:35:45

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-36	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	17 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:11:01	3899.92	19.08	5.73	355.09	6.34	--	1.51	166.32
Last 5	14:16:02	4200.92	19.03	5.74	355.24	5.78	--	1.50	164.62
Last 5	14:21:02	4500.91	19.01	5.74	355.11	5.21	--	1.47	163.14
Last 5	14:26:02	4800.90	18.92	5.74	354.91	4.98	--	1.46	162.74
Last 5	14:31:03	5101.90	18.89	5.74	354.45	4.57	--	1.47	164.34
Variance 0			-0.02	0.00	-0.12			-0.03	-1.48
Variance 1			-0.09	-0.00	-0.20			-0.01	-0.40
Variance 2			-0.03	-0.01	-0.46			0.01	1.61

Notes

Sampled at 14:35. Cloudy 60s.

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

April 07, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates-R6
Pace Project No.: 2616760

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on March 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates-R6
Pace Project No.: 2616760

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: Plant Yates-R6
Pace Project No.: 2616760

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2616760001	**YGWA-39**	Water	03/27/19 12:27	03/29/19 10:10
2616760002	**YGWA-40**	Water	03/26/19 15:07	03/29/19 10:10
2616760003	**YGWC-38**	Water	03/27/19 13:33	03/29/19 10:10
2616760004	**YGWC-41**	Water	03/28/19 11:50	03/29/19 10:10
2616760005	**YGWC-42**	Water	03/27/19 15:15	03/29/19 10:10
2616760006	**YGWC-43**	Water	03/28/19 14:05	03/29/19 10:10
2616760007	**EB-1-3-27-19**	Water	03/27/19 13:45	03/29/19 10:10
2616760008	**Dup-1**	Water	03/27/19 00:00	03/29/19 10:10
2616760009	**FB-1-3-28-19**	Water	03/28/19 13:40	03/29/19 10:10

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SAMPLE ANALYTE COUNT

Project: Plant Yates-R6
Pace Project No.: 2616760

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2616760001	**YGWA-39**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760002	**YGWA-40**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760003	**YGWC-38**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760004	**YGWC-41**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760005	**YGWC-42**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760006	**YGWC-43**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760007	**EB-1-3-27-19**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760008	**Dup-1**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3
2616760009	**FB-1-3-28-19**	EPA 6020B	CSW	2
		SM 2540C	RLC	1
		EPA 300.0	RLC	3

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: YGWA-39 **Lab ID: 2616760001** Collected: 03/27/19 12:27 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.017J**	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 19:00	7440-42-8	
Calcium	**1.5**	mg/L	0.50	0.014	1	04/03/19 11:25	04/04/19 19:00	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**75.0**	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.4**	mg/L	0.25	0.024	1		04/04/19 19:18	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 19:18	16984-48-8	
Sulfate	**17.7**	mg/L	1.0	0.017	1		04/04/19 19:18	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: YGWA-40 **Lab ID: 2616760002** Collected: 03/26/19 15:07 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.096**	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 19:11	7440-42-8	
Calcium	**5.6**	mg/L	0.50	0.014	1	04/03/19 11:25	04/04/19 19:11	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**90.0**	mg/L	25.0	10.0	1		04/02/19 19:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.4**	mg/L	0.25	0.024	1		04/04/19 20:20	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 20:20	16984-48-8	
Sulfate	**34.3**	mg/L	1.0	0.017	1		04/04/19 20:20	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: YGWC-38 **Lab ID: 2616760003** Collected: 03/27/19 13:33 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**16.7**	mg/L	2.0	0.20	50	04/03/19 11:25	04/04/19 19:28	7440-42-8	
Calcium	**155**	mg/L	25.0	0.69	50	04/03/19 11:25	04/04/19 19:28	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1190**	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.2**	mg/L	0.25	0.024	1		04/04/19 20:41	16887-00-6	
Fluoride	**0.24J**	mg/L	0.30	0.029	1		04/04/19 20:41	16984-48-8	
Sulfate	**851**	mg/L	50.0	0.85	50		04/06/19 07:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: YGWC-41 **Lab ID: 2616760004** Collected: 03/28/19 11:50 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**7.1**	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 19:46	7440-42-8	
Calcium	**26.0**	mg/L	25.0	0.69	50	04/03/19 11:25	04/04/19 19:51	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**372**	mg/L	25.0	10.0	1		04/03/19 18:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.2**	mg/L	0.25	0.024	1		04/04/19 21:01	16887-00-6	
Fluoride	**0.10J**	mg/L	0.30	0.029	1		04/04/19 21:01	16984-48-8	
Sulfate	**258**	mg/L	10.0	0.17	10		04/06/19 07:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: YGWC-42 **Lab ID: 2616760005** Collected: 03/27/19 15:15 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**20.3**	mg/L	2.0	0.20	50	04/03/19 11:25	04/04/19 20:03	7440-42-8	
Calcium	**109**	mg/L	25.0	0.69	50	04/03/19 11:25	04/04/19 20:03	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1100**	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.9**	mg/L	0.25	0.024	1		04/04/19 21:22	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 21:22	16984-48-8	
Sulfate	**831**	mg/L	50.0	0.85	50		04/06/19 08:14	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: YGWC-43 **Lab ID: 2616760006** Collected: 03/28/19 14:05 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**1.8**	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 20:08	7440-42-8	
Calcium	**8.9**	mg/L	0.50	0.014	1	04/03/19 11:25	04/04/19 20:08	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**323**	mg/L	25.0	10.0	1		04/03/19 18:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.8**	mg/L	0.25	0.024	1		04/04/19 21:43	16887-00-6	
Fluoride	**0.078J**	mg/L	0.30	0.029	1		04/04/19 21:43	16984-48-8	
Sulfate	**181**	mg/L	10.0	0.17	10		04/06/19 08:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: EB-1-3-27-19 **Lab ID: 2616760007** Collected: 03/27/19 13:45 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.0095J**	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 20:20	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	04/03/19 11:25	04/04/19 20:20	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**34.0**	mg/L	25.0	10.0	1		04/03/19 18:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.068J**	mg/L	0.25	0.024	1		04/04/19 22:04	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 22:04	16984-48-8	
Sulfate	**0.16J**	mg/L	1.0	0.017	1		04/04/19 22:04	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: Dup-1 **Lab ID: 2616760008** Collected: 03/27/19 00:00 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	**0.024J**	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 20:26	7440-42-8	
Calcium	**1.5**	mg/L	0.50	0.014	1	04/03/19 11:25	04/04/19 20:26	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**83.0**	mg/L	25.0	10.0	1		04/03/19 18:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.4**	mg/L	0.25	0.024	1		04/04/19 22:24	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		04/04/19 22:24	16984-48-8	
Sulfate	**17.7**	mg/L	1.0	0.017	1		04/04/19 22:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2616760

Sample: FB-1-3-28-19 **Lab ID: 2616760009** Collected: 03/28/19 13:40 Received: 03/29/19 10:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Boron	ND	mg/L	0.040	0.0039	1	04/03/19 11:25	04/04/19 20:37	7440-42-8	
Calcium	ND	mg/L	0.50	0.014	1	04/03/19 11:25	04/04/19 20:37	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		04/03/19 18:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.069J**	mg/L	0.25	0.024	1		04/05/19 00:08	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		04/05/19 00:08	16984-48-8	
Sulfate	**0.045J**	mg/L	1.0	0.017	1		04/05/19 00:08	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2616760

QC Batch: 25683 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2616760001, 2616760002, 2616760003, 2616760004, 2616760005, 2616760006, 2616760007, 2616760008, 2616760009

METHOD BLANK: 115845 Matrix: Water
Associated Lab Samples: 2616760001, 2616760002, 2616760003, 2616760004, 2616760005, 2616760006, 2616760007, 2616760008, 2616760009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0039	04/04/19 18:37	
Calcium	mg/L	ND	0.50	0.014	04/04/19 18:37	

LABORATORY CONTROL SAMPLE: 115846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	100	80-120	
Calcium	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 115847 115848

Parameter	Units	2616761004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.89	1	1	1.8	1.8	94	89	75-125	2	20	
Calcium	mg/L	54.2	1	1	58.6	54.4	439	16	75-125	7	20	M6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2616760

QC Batch: 25629
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616760002

LABORATORY CONTROL SAMPLE: 115527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 115528

Parameter	Units	2616666007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	292	305	4	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2616760

QC Batch: 25700 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616760001, 2616760003, 2616760005, 2616760007, 2616760008

LABORATORY CONTROL SAMPLE: 115940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	84-108	

SAMPLE DUPLICATE: 115941

Parameter	Units	2616689004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10.0J	ND		10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2616760

QC Batch: 25701 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2616760004, 2616760006, 2616760009

LABORATORY CONTROL SAMPLE: 115944

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	399	100	84-108	

SAMPLE DUPLICATE: 115945

Parameter	Units	2616761001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	170	167	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2616760

QC Batch: 25766 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2616760001, 2616760002, 2616760003, 2616760004, 2616760005, 2616760006, 2616760007, 2616760008, 2616760009

METHOD BLANK: 116236 Matrix: Water
Associated Lab Samples: 2616760001, 2616760002, 2616760003, 2616760004, 2616760005, 2616760006, 2616760007, 2616760008, 2616760009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.053J	0.25	0.024	04/04/19 18:36	
Fluoride	mg/L	ND	0.30	0.029	04/04/19 18:36	
Sulfate	mg/L	0.060J	1.0	0.017	04/04/19 18:36	

LABORATORY CONTROL SAMPLE: 116237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.1	101	90-110	
Sulfate	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 116238 116239

Parameter	Units	2616760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.4	10	10	11.2	11.4	99	100	90-110	1	15	
Fluoride	mg/L	ND	10	10	9.8	9.9	98	99	90-110	1	15	
Sulfate	mg/L	17.7	10	10	26.1	26.2	84	85	90-110	0	15	M1

MATRIX SPIKE SAMPLE: 116240

Parameter	Units	2616760002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	4.4	10	14.7	103	90-110	
Fluoride	mg/L	ND	10	10.1	101	90-110	
Sulfate	mg/L	34.3	10	41.3	69	90-110	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates-R6
Pace Project No.: 2616760

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates-R6
Pace Project No.: 2616760

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2616760001	**YGWA-39**	EPA 3005A	25683	EPA 6020B	25758
2616760002	**YGWA-40**	EPA 3005A	25683	EPA 6020B	25758
2616760003	**YGWC-38**	EPA 3005A	25683	EPA 6020B	25758
2616760004	**YGWC-41**	EPA 3005A	25683	EPA 6020B	25758
2616760005	**YGWC-42**	EPA 3005A	25683	EPA 6020B	25758
2616760006	**YGWC-43**	EPA 3005A	25683	EPA 6020B	25758
2616760007	**EB-1-3-27-19**	EPA 3005A	25683	EPA 6020B	25758
2616760008	**Dup-1**	EPA 3005A	25683	EPA 6020B	25758
2616760009	**FB-1-3-28-19**	EPA 3005A	25683	EPA 6020B	25758
2616760001	**YGWA-39**	SM 2540C	25700		
2616760002	**YGWA-40**	SM 2540C	25629		
2616760003	**YGWC-38**	SM 2540C	25700		
2616760004	**YGWC-41**	SM 2540C	25701		
2616760005	**YGWC-42**	SM 2540C	25700		
2616760006	**YGWC-43**	SM 2540C	25701		
2616760007	**EB-1-3-27-19**	SM 2540C	25700		
2616760008	**Dup-1**	SM 2540C	25700		
2616760009	**FB-1-3-28-19**	SM 2540C	25701		
2616760001	**YGWA-39**	EPA 300.0	25766		
2616760002	**YGWA-40**	EPA 300.0	25766		
2616760003	**YGWC-38**	EPA 300.0	25766		
2616760004	**YGWC-41**	EPA 300.0	25766		
2616760005	**YGWC-42**	EPA 300.0	25766		
2616760006	**YGWC-43**	EPA 300.0	25766		
2616760007	**EB-1-3-27-19**	EPA 300.0	25766		
2616760008	**Dup-1**	EPA 300.0	25766		
2616760009	**FB-1-3-28-19**	EPA 300.0	25766		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - R6

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)								LAB ID NUMBER
CONTAINER TYPE:								P	P								
PRESERVATION:								3	7								
3-27-19	1227	GW		✓	YGWA-39	2		1	1								
3-26-19	1507	GW		✓	YGWA-40	2		1	1								
3-27-19	1333	GW		✓	YGWC-38	2		1	1								
3-28-19	1150	GW		✓	YGWC-41	2		1	1								
3-27-19	1515	GW		✓	YGWC-42	2		1	1								
3-28-19	1405	GW		✓	YGWC-43	2		1	1								
3-27-19	1345	W		✓	EB-1-3-27-19	2		1	1								
3-27-19	—	GW		✓	Dup-1	2		1	1								
3-28-19	1340	W		✓	FB-1-3-28-19	2		1	1								

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 2616760

2616760

SAMPLED BY AND TITLE: [signature] A/C — DATE/TIME: see above

RELINQUISHED BY: [signature] — DATE/TIME: 3-29-19 1010

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [signature] — DATE/TIME: 03/29/19 1010

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA — Ice: Yes No NA — Temperature: Min: 0.3 Max:

Custody Seal: Intact Broken Not Present — # of Coolers: — Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP III

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2616760

PM: BM Due Date: 04/05/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None

Cooler Temperature 0.3 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

☐ Samples on ice, cooling process has begun

Date and Initials of person examining contents: 3/29/19 MK

Comments:

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.	
Sufficient Volume:	☑Yes ☐No ☐N/A	8.	
Correct Containers Used:	☑Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☑Yes ☐No ☐N/A		
Containers Intact:	☑Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.	
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: W			
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.	
Trip Blank Present:	☐Yes ☐No ☑N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Product Name: Low-Flow System

Date: 2019-03-27 12:26:47

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates-R6	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	69 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	63 ft

Well Information:		Pumping Information:	
Well ID	YGWA-39	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.151039 L
Well Total Depth	68.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3.2 in
Depth to Water	22.63 ft	Total Volume Pumped	13.4 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	12:00:06	2404.04	17.63	5.90	81.96	1.30	22.90	2.08	120.57
Last 5	12:05:06	2704.03	17.59	5.89	81.87	1.20	22.90	1.89	122.37
Last 5	12:10:07	3005.04	17.59	5.85	82.45	1.30	22.90	2.15	120.47
Last 5	12:15:12	3310.03	17.59	5.80	81.17	1.00	22.90	2.11	115.72
Last 5	12:25:13	3911.03	17.71	5.84	80.91	1.10	22.90	2.17	110.82
Variance 0			-0.00	-0.04	0.58			0.26	-1.91
Variance 1			0.00	-0.05	-1.28			-0.04	-4.75
Variance 2			0.12	0.05	-0.26			0.07	-4.90

Notes

Sampled at 1227 on 3-27-19. Sunny, 50s. DUP-1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-26 15:07:31

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates-R6	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	49 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	43.5 ft

Well Information:		Pumping Information:	
Well ID	YGWA-40	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	0.9579839 L
Well Total Depth	48.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6.1 in
Depth to Water	23.89 ft	Total Volume Pumped	4.8 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	14:42:26	300.10	17.19	6.22	123.26	1.00	24.40	6.75	203.05
Last 5	14:47:26	600.03	17.18	5.62	115.47	0.40	24.40	5.66	195.73
Last 5	14:52:26	900.02	17.21	5.40	114.88	0.30	24.40	5.31	186.69
Last 5	14:57:26	1200.04	17.23	5.33	115.77	0.30	24.40	5.21	186.69
Last 5	15:02:26	1500.03	17.23	5.30	117.47	0.25	24.40	5.21	187.03
Variance 0			0.03	-0.23	-0.60			-0.35	-9.04
Variance 1			0.03	-0.07	0.89			-0.09	0.00
Variance 2			-0.00	-0.03	1.69			-0.00	0.34

Notes

Sampled at 1507 on 3-26-19. Cloudy, 50s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 13:34:42

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates-R6	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	51 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWC-38	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.9772893 L
Well Total Depth	50.12 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	4.3 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	13:11:09	600.04	18.48	5.57	1478.32	0.60	--	8.11	136.25
Last 5	13:16:09	900.05	16.92	4.87	1412.99	0.50	--	2.24	167.51
Last 5	13:21:09	1200.03	16.69	4.80	1398.61	0.90	--	1.53	165.63
Last 5	13:26:12	1503.03	16.68	4.79	1399.60	1.10	--	1.41	163.61
Last 5	13:31:12	1803.06	16.74	4.79	1394.50	1.20	--	1.47	162.43
Variance 0			-0.23	-0.06	-14.38			-0.71	-1.87
Variance 1			-0.02	-0.02	0.99			-0.12	-2.02
Variance 2			0.06	0.00	-5.10			0.06	-1.19

Notes

Sampled at 1333 on 3-27-19. Sunny, 50s. Transducer in well. EB-1-3-27-2019 here. Tubing

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 11:47:22

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - R6	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	67 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	62 ft

Well Information:		Pumping Information:	
Well ID	YGWC-41	Final Pumping Rate	220 mL/min
Well diameter	2 in	Total System Volume	0.7840493 L
Well Total Depth	67.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	24.94 ft	Total Volume Pumped	11 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:18:58	900.00	18.37	5.13	571.20	1.21	25.50	1.97	205.39
Last 5	11:23:58	1200.00	18.52	5.04	570.94	1.79	25.50	2.27	205.66
Last 5	11:33:58	1799.98	18.45	5.02	574.03	0.78	25.50	2.73	204.20
Last 5	11:38:58	2099.97	18.60	5.01	575.54	0.52	25.50	2.73	204.35
Last 5	11:43:58	2399.96	18.78	5.00	574.23	0.49	25.50	2.71	202.41
Variance 0			-0.06	-0.03	3.09			0.46	-1.46
Variance 1			0.15	-0.01	1.51			-0.00	0.15
Variance 2			0.18	-0.01	-1.32			-0.02	-1.94

Notes

Sampled at 11:50. Sunny 80s

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 15:13:21

Project Information:		Pump Information:	
Operator Name	Hunter Auld	Pump Model/Type	QED Bladder Pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates-R6	Tubing Diameter	0.25 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	407447		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-42	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	20.52 in
Depth to Water	25.59 ft	Total Volume Pumped	7.2 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	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 0
Last 5	14:52:03	1806.04	18.26	5.59	1305.59	11.50	27.20	0.54	117.10
Last 5	14:57:03	2106.02	17.87	5.59	1322.36	10.60	27.30	0.65	116.16
Last 5	15:02:29	2432.04	17.59	5.59	1328.38	9.35	27.30	0.68	117.94
Last 5	15:07:29	2732.03	17.49	5.58	1346.46	6.45	27.30	0.66	118.23
Last 5	15:12:29	3032.03	17.37	5.57	1360.60	4.83	27.30	0.70	121.07
Variance 0			-0.28	0.00	6.02			0.03	1.79
Variance 1			-0.09	-0.01	18.08			-0.02	0.29
Variance 2			-0.13	-0.01	14.14			0.04	2.83

Notes

Sampled at 1515 on 3-27-19. Sunny, 60.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-28 14:01:20

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	369807		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWC-43	Final Pumping Rate	230 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	14.12 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:37:50	600.01	18.48	6.54	419.74	7.06	14.30	0.11	39.05
Last 5	13:42:50	900.00	18.34	6.07	452.65	6.22	14.30	0.06	53.09
Last 5	13:47:50	1199.99	18.34	5.98	463.09	5.25	14.30	0.05	58.27
Last 5	13:52:50	1499.98	18.19	5.97	466.03	4.64	14.30	0.05	64.59
Last 5	13:57:50	1799.98	18.26	5.96	467.90	4.04	14.30	0.06	71.83
Variance 0			-0.00	-0.08	10.44			-0.01	5.18
Variance 1			-0.15	-0.02	2.93			0.00	6.32
Variance 2			0.07	-0.01	1.88			0.01	7.24

Notes

Sampled at 14:05. Sunny 60s. FB 1 here at 13:40.

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates-R6
Pace Project No.: 2622319

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on August 22, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 9/3/2019. The report has been revised to correct the project-required RLs per consultant request. No other changes have been made to this report.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates-R6
Pace Project No.: 2622319

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: Plant Yates-R6
Pace Project No.: 2622319

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622319001	**YGWA-39**	Water	08/21/19 13:45	08/22/19 16:30
2622319002	**YGWA-40**	Water	08/21/19 14:45	08/22/19 16:30
2622319003	**YGWC-38**	Water	08/22/19 10:15	08/22/19 16:30
2622319004	**YGWC-43**	Water	08/21/19 12:30	08/22/19 16:30
2622319005	**EB-1-8-22-19**	Water	08/22/19 10:00	08/22/19 16:30
2622319006	**YGWC-41**	Water	08/22/19 11:50	08/22/19 16:30
2622319007	**FB-1-8-22-19**	Water	08/22/19 13:10	08/22/19 16:30
2622319008	**YGWC-42**	Water	08/22/19 13:35	08/22/19 16:30
2622319009	**Dup-1**	Water	08/22/19 00:00	08/22/19 16:30

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SAMPLE ANALYTE COUNT

Project: Plant Yates-R6
Pace Project No.: 2622319

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2622319001	**YGWA-39**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319002	**YGWA-40**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319003	**YGWC-38**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319004	**YGWC-43**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319005	**EB-1-8-22-19**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319006	**YGWC-41**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319007	**FB-1-8-22-19**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319008	**YGWC-42**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1
2622319009	**Dup-1**	EPA 6020B	CSW	12
		EPA 7470A	DRB	1
		EPA 300.0	MWB	1

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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: YGWA-39 **Lab ID: 2622319001** Collected: 08/21/19 13:45 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 20:48	7440-36-0	
Arsenic	**0.00058J**	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 20:48	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 20:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 20:48	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 20:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 20:48	7440-47-3	
Cobalt	**0.00034J**	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 20:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 20:48	7439-92-1	
Lithium	**0.0035J**	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 20:48	7439-93-2	
Molybdenum	**0.0021J**	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 20:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 20:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 20:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:05	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 05:42	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: YGWA-40 **Lab ID: 2622319002** Collected: 08/21/19 14:45 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 20:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 20:54	7440-38-2	
Barium	**0.035**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 20:54	7440-39-3	
Beryllium	**0.00020J**	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 20:54	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 20:54	7440-43-9	
Chromium	**0.00053J**	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 20:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 20:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 20:54	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 20:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 20:54	7439-98-7	
Selenium	**0.0024J**	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 20:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 20:54	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:08	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 06:05	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: YGWC-38 **Lab ID: 2622319003** Collected: 08/22/19 10:15 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 20:59	7440-36-0	
Arsenic	**0.00055J**	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 20:59	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 20:59	7440-39-3	
Beryllium	**0.0049**	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 20:59	7440-41-7	
Cadmium	**0.0023J**	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 20:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 20:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 20:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 20:59	7439-92-1	
Lithium	**0.0082J**	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 20:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 20:59	7439-98-7	
Selenium	**0.14**	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 20:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 20:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:10	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 06:28	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: YGWC-43 **Lab ID: 2622319004** Collected: 08/21/19 12:30 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 21:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 21:05	7440-38-2	
Barium	**0.030**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 21:05	7440-39-3	
Beryllium	**0.00030J**	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 21:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 21:05	7440-43-9	
Chromium	**0.00062J**	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 21:05	7440-47-3	
Cobalt	**0.0026J**	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 21:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 21:05	7439-92-1	
Lithium	**0.015J**	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 21:05	7439-93-2	
Molybdenum	**0.0012J**	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 21:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 21:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 21:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:13	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	**0.062J**	mg/L	0.30	0.029	1		08/30/19 06:50	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: EB-1-8-22-19 **Lab ID: 2622319005** Collected: 08/22/19 10:00 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 21:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 21:11	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 21:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 21:11	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 21:11	7440-43-9	
Chromium	**0.00049J**	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 21:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 21:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 21:11	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 21:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 21:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 21:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 21:11	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:15	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 07:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: YGWC-41 **Lab ID: 2622319006** Collected: 08/22/19 11:50 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 21:28	7440-36-0	
Arsenic	**0.00036J**	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 21:28	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 21:28	7440-39-3	
Beryllium	**0.0026J**	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 21:28	7440-41-7	
Cadmium	**0.00015J**	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 21:28	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 21:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 21:28	7440-48-4	
Lead	**0.000067J**	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 21:28	7439-92-1	
Lithium	**0.0035J**	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 21:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 21:28	7439-98-7	
Selenium	**0.058**	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 21:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 21:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:22	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 08:44	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: FB-1-8-22-19 **Lab ID: 2622319007** Collected: 08/22/19 13:10 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 21:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 21:34	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 21:34	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 21:34	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 21:34	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 21:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 21:34	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 21:34	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 21:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 21:34	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 21:34	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 21:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:24	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 09:06	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: YGWC-42 **Lab ID: 2622319008** Collected: 08/22/19 13:35 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 21:39	7440-36-0	
Arsenic	**0.00089J**	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 21:39	7440-38-2	
Barium	**0.031**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 21:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 21:39	7440-41-7	
Cadmium	**0.00017J**	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 21:39	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 21:39	7440-47-3	
Cobalt	**0.0019J**	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 21:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 21:39	7439-92-1	
Lithium	**0.047**	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 21:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 21:39	7439-98-7	
Selenium	**0.047**	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 21:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 21:39	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:27	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 09:29	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates-R6
Pace Project No.: 2622319

Sample: Dup-1 **Lab ID: 2622319009** Collected: 08/22/19 00:00 Received: 08/22/19 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	08/23/19 14:12	08/26/19 21:45	7440-36-0	
Arsenic	**0.00053J**	mg/L	0.0050	0.00035	1	08/23/19 14:12	08/26/19 21:45	7440-38-2	
Barium	**0.020**	mg/L	0.010	0.00049	1	08/23/19 14:12	08/26/19 21:45	7440-39-3	
Beryllium	**0.0026J**	mg/L	0.0030	0.000074	1	08/23/19 14:12	08/26/19 21:45	7440-41-7	
Cadmium	**0.00016J**	mg/L	0.0025	0.00011	1	08/23/19 14:12	08/26/19 21:45	7440-43-9	
Chromium	ND	mg/L	0.010	0.00039	1	08/23/19 14:12	08/26/19 21:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	08/23/19 14:12	08/26/19 21:45	7440-48-4	
Lead	**0.000081J**	mg/L	0.0050	0.000046	1	08/23/19 14:12	08/26/19 21:45	7439-92-1	
Lithium	**0.0032J**	mg/L	0.030	0.00078	1	08/23/19 14:12	08/26/19 21:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	08/23/19 14:12	08/26/19 21:45	7439-98-7	
Selenium	**0.054**	mg/L	0.010	0.0013	1	08/23/19 14:12	08/26/19 21:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	08/23/19 14:12	08/26/19 21:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	mg/L	0.00050	0.00014	1	08/26/19 14:21	08/27/19 13:29	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Fluoride	ND	mg/L	0.30	0.029	1		08/30/19 14:42	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2622319

QC Batch: 34233 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 2622319001, 2622319002, 2622319003, 2622319004, 2622319005, 2622319006, 2622319007, 2622319008, 2622319009

METHOD BLANK: 154036 Matrix: Water
Associated Lab Samples: 2622319001, 2622319002, 2622319003, 2622319004, 2622319005, 2622319006, 2622319007, 2622319008, 2622319009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.00014	08/27/19 12:05	

LABORATORY CONTROL SAMPLE: 154037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 154038 154039

Parameter	Units	2622267002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0026	101	102	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2622319

QC Batch: 34179 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2622319001, 2622319002, 2622319003, 2622319004, 2622319005, 2622319006, 2622319007, 2622319008, 2622319009

METHOD BLANK: 153793 Matrix: Water
Associated Lab Samples: 2622319001, 2622319002, 2622319003, 2622319004, 2622319005, 2622319006, 2622319007, 2622319008, 2622319009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00075J	0.0030	0.00027	08/26/19 19:11	
Arsenic	mg/L	ND	0.0050	0.00035	08/26/19 19:11	
Barium	mg/L	ND	0.010	0.00049	08/26/19 19:11	
Beryllium	mg/L	ND	0.0030	0.000074	08/26/19 19:11	
Cadmium	mg/L	ND	0.0025	0.00011	08/26/19 19:11	
Chromium	mg/L	ND	0.010	0.00039	08/26/19 19:11	
Cobalt	mg/L	ND	0.0050	0.00030	08/26/19 19:11	
Lead	mg/L	ND	0.0050	0.000046	08/26/19 19:11	
Lithium	mg/L	ND	0.030	0.00078	08/26/19 19:11	
Molybdenum	mg/L	ND	0.010	0.00095	08/26/19 19:11	
Selenium	mg/L	ND	0.010	0.0013	08/26/19 19:11	
Thallium	mg/L	ND	0.0010	0.000052	08/26/19 19:11	

LABORATORY CONTROL SAMPLE: 153794

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.092	92	80-120	
Arsenic	mg/L	0.1	0.10	103	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	105	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.081	81	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.086	86	80-120	
Lithium	mg/L	0.1	0.10	105	80-120	
Molybdenum	mg/L	0.1	0.091	91	80-120	
Selenium	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153795 153796

Parameter	Units	2622267002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	0.00039J	0.1	0.1	0.11	0.10	108	103	75-125	5	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Barium	mg/L	0.017	0.1	0.1	0.13	0.12	108	101	75-125	5	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2622319

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153795 153796

Parameter	Units	2622267002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Chromium	mg/L	0.00073J	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	0	20	
Lead	mg/L	0.000064J	0.1	0.1	0.095	0.097	94	97	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	101	97	75-125	5	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.095	0.099	95	98	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2622319

QC Batch: 34532 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2622319001, 2622319002, 2622319003, 2622319004, 2622319005, 2622319006, 2622319007, 2622319008

METHOD BLANK: 155480 Matrix: Water
Associated Lab Samples: 2622319001, 2622319002, 2622319003, 2622319004, 2622319005, 2622319006, 2622319007, 2622319008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	08/29/19 22:10	

LABORATORY CONTROL SAMPLE: 155481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	9.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155482 155483

Parameter	Units	2622265001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	9.3	9.2	93	92	90-110	0	15	

MATRIX SPIKE SAMPLE: 155490

Parameter	Units	2622267002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	10	8.5	85	90-110	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-R6
Pace Project No.: 2622319

QC Batch: 34533 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2622319009

METHOD BLANK: 155485 Matrix: Water
Associated Lab Samples: 2622319009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.30	0.029	08/30/19 13:57	

LABORATORY CONTROL SAMPLE: 155486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	10	9.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 155487 155488

Parameter	Units	2622319009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	10	10	10.8	10.7	108	107	90-110	1	15	

MATRIX SPIKE SAMPLE: 155523

Parameter	Units	2622337002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	0.11J	10	9.5	94	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates-R6
Pace Project No.: 2622319

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates-R6
Pace Project No.: 2622319

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622319001	**YGWA-39**	EPA 3005A	34179	EPA 6020B	34192
2622319002	**YGWA-40**	EPA 3005A	34179	EPA 6020B	34192
2622319003	**YGWC-38**	EPA 3005A	34179	EPA 6020B	34192
2622319004	**YGWC-43**	EPA 3005A	34179	EPA 6020B	34192
2622319005	**EB-1-8-22-19**	EPA 3005A	34179	EPA 6020B	34192
2622319006	**YGWC-41**	EPA 3005A	34179	EPA 6020B	34192
2622319007	**FB-1-8-22-19**	EPA 3005A	34179	EPA 6020B	34192
2622319008	**YGWC-42**	EPA 3005A	34179	EPA 6020B	34192
2622319009	**Dup-1**	EPA 3005A	34179	EPA 6020B	34192
2622319001	**YGWA-39**	EPA 7470A	34233	EPA 7470A	34310
2622319002	**YGWA-40**	EPA 7470A	34233	EPA 7470A	34310
2622319003	**YGWC-38**	EPA 7470A	34233	EPA 7470A	34310
2622319004	**YGWC-43**	EPA 7470A	34233	EPA 7470A	34310
2622319005	**EB-1-8-22-19**	EPA 7470A	34233	EPA 7470A	34310
2622319006	**YGWC-41**	EPA 7470A	34233	EPA 7470A	34310
2622319007	**FB-1-8-22-19**	EPA 7470A	34233	EPA 7470A	34310
2622319008	**YGWC-42**	EPA 7470A	34233	EPA 7470A	34310
2622319009	**Dup-1**	EPA 7470A	34233	EPA 7470A	34310
2622319001	**YGWA-39**	EPA 300.0	34532		
2622319002	**YGWA-40**	EPA 300.0	34532		
2622319003	**YGWC-38**	EPA 300.0	34532		
2622319004	**YGWC-43**	EPA 300.0	34532		
2622319005	**EB-1-8-22-19**	EPA 300.0	34532		
2622319006	**YGWC-41**	EPA 300.0	34532		
2622319007	**FB-1-8-22-19**	EPA 300.0	34532		
2622319008	**YGWC-42**	EPA 300.0	34532		
2622319009	**Dup-1**	EPA 300.0	34533		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: _____ OF _____

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - R6

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	LAB ID NUMBER	Metals App. IV (EPA 6020/7470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)
					CONTAINER TYPE:			P	P	P
					PRESERVATION:			3	7	3
8-21-19	1345	GW		X	YGWA-39	4		✓	✓	✓
8-21-19	1445	GW		X	YGWA-40	4		✓	✓	✓
8-22-19	1015	GW		X	YGWC-38	4		✓	✓	✓
8-21-19	1230	GW		X	YGWC-43	4		✓	✓	✓
8-22-19	1000	W		X	EB-1-8-22-19	4		✓	✓	✓
8-22-19	1150	GW		X	YGWC-41	4		✓	✓	✓
8-22-19	1310	W		X	FB-1-8-22-19	4		✓	✓	✓
8-22-19	1335	GW		X	YGWC-42	6		✓	✓	✓
—	—	GW		X	Dup-1	4		✓	✓	✓

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

WO#: 2622319

2622319

SAMPLED BY AND TITLE: B Benstead ACC

DATE/TIME: 8-22-19 1335

RELINQUISHED BY: A Sames ACC

DATE/TIME: 8-22-19 1630

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY LAB:

DATE/TIME: 8/22/19 1630

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min: 1.1 °C Max:

Custody Seal: Intact Broken Not Present

# of Coolers

Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

APP IV

Page 21 of 22

Yates- R6- Blank COCs

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2622319

PM: BM **Due Date: 08/29/19**

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1-6 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 8/22/19 MP

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

September 20, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates-R6
Pace Project No.: 2622320

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on August 22, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

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CERTIFICATIONS

Project: Plant Yates-R6
Pace Project No.: 2622320

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Yates-R6
Pace Project No.: 2622320

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2622320001	**YGWA-39**	Water	08/21/19 13:45	08/22/19 16:30
2622320002	**YGWA-40**	Water	08/21/19 14:45	08/22/19 16:30
2622320003	**YGWC-38**	Water	08/22/19 10:15	08/22/19 16:30
2622320004	**YGWC-43**	Water	08/21/19 12:30	08/22/19 16:30
2622320005	**EB-1-8-22-19**	Water	08/22/19 10:00	08/22/19 16:30
2622320006	**YGWC-41**	Water	08/22/19 11:50	08/22/19 16:30
2622320007	**FB-1-8-22-19**	Water	08/22/19 13:10	08/22/19 16:30
2622320008	**YGWC-42**	Water	08/22/19 13:35	08/22/19 16:30
2622320009	**Dup-1**	Water	08/22/19 00:00	08/22/19 16:30

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SAMPLE ANALYTE COUNT

Project: Plant Yates-R6
Pace Project No.: 2622320

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2622320001	**YGWA-39**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320002	**YGWA-40**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320003	**YGWC-38**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320004	**YGWC-43**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320005	**EB-1-8-22-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320006	**YGWC-41**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320007	**FB-1-8-22-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320008	**YGWC-42**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2622320009	**Dup-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: YGWA-39 **Lab ID: 2622320001** Collected: 08/21/19 13:45 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.465 ± 0.298 (0.453) C:90% T:NA**	pCi/L	09/05/19 08:08	13982-63-3	
Radium-228	EPA 9320	**0.542 ± 0.423 (0.838) C:71% T:78%**	pCi/L	09/16/19 12:48	15262-20-1	
Total Radium	Total Radium Calculation	**1.01 ± 0.721 (1.29)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: YGWA-40 **Lab ID: 2622320002** Collected: 08/21/19 14:45 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.605 ± 0.372 (0.622) C:90% T:NA**	pCi/L	09/05/19 08:09	13982-63-3	
Radium-228	EPA 9320	**0.635 ± 0.403 (0.752) C:75% T:77%**	pCi/L	09/16/19 12:48	15262-20-1	
Total Radium	Total Radium Calculation	**1.24 ± 0.775 (1.37)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: YGWC-38 **Lab ID: 2622320003** Collected: 08/22/19 10:15 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.685 ± 0.371 (0.580) C:93% T:NA**	pCi/L	09/05/19 09:48	13982-63-3	
Radium-228	EPA 9320	**1.28 ± 0.494 (0.738) C:69% T:85%**	pCi/L	09/16/19 12:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.97 ± 0.865 (1.32)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: YGWC-43 **Lab ID: 2622320004** Collected: 08/21/19 12:30 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**2.15 ± 0.622 (0.505) C:93% T:NA**	pCi/L	09/05/19 08:08	13982-63-3	
Radium-228	EPA 9320	**1.01 ± 0.471 (0.801) C:75% T:80%**	pCi/L	09/16/19 12:48	15262-20-1	
Total Radium	Total Radium Calculation	**3.16 ± 1.09 (1.31)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: EB-1-8-22-19 **Lab ID: 2622320005** Collected: 08/22/19 10:00 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.362 ± 0.255 (0.411) C:95% T:NA**	pCi/L	09/05/19 09:48	13982-63-3	
Radium-228	EPA 9320	**0.401 ± 0.376 (0.762) C:72% T:76%**	pCi/L	09/16/19 12:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.763 ± 0.631 (1.17)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: YGWC-41 **Lab ID: 2622320006** Collected: 08/22/19 11:50 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.814 ± 0.362 (0.379) C:87% T:NA**	pCi/L	09/05/19 09:51	13982-63-3	
Radium-228	EPA 9320	**1.22 ± 0.472 (0.690) C:69% T:82%**	pCi/L	09/16/19 12:49	15262-20-1	
Total Radium	Total Radium Calculation	**2.03 ± 0.834 (1.07)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: FB-1-8-22-19 **Lab ID: 2622320007** Collected: 08/22/19 13:10 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.448 ± 0.274 (0.388) C:93% T:NA**	pCi/L	09/05/19 09:52	13982-63-3	
Radium-228	EPA 9320	**0.285 ± 0.350 (0.738) C:67% T:80%**	pCi/L	09/16/19 12:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.733 ± 0.624 (1.13)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: YGWC-42 **Lab ID: 2622320008** Collected: 08/22/19 13:35 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.928 ± 0.366 (0.292) C:92% T:NA**	pCi/L	09/05/19 13:15	13982-63-3	
Radium-228	EPA 9320	**0.658 ± 0.379 (0.691) C:73% T:91%**	pCi/L	09/16/19 12:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.59 ± 0.745 (0.983)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

Sample: Dup-1 **Lab ID: 2622320009** Collected: 08/22/19 00:00 Received: 08/22/19 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.611 ± 0.366 (0.571) C:79% T:NA**	pCi/L	09/05/19 09:48	13982-63-3	
Radium-228	EPA 9320	**0.312 ± 0.312 (0.640) C:71% T:87%**	pCi/L	09/16/19 12:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.923 ± 0.678 (1.21)**	pCi/L	09/17/19 14:18	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

QC Batch: 359490 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2622320001, 2622320002, 2622320003, 2622320004, 2622320005, 2622320006, 2622320007, 2622320008, 2622320009

METHOD BLANK: 1745579 Matrix: Water
Associated Lab Samples: 2622320001, 2622320002, 2622320003, 2622320004, 2622320005, 2622320006, 2622320007, 2622320008, 2622320009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.243 ± 0.244 (0.474) C:94% T:NA	pCi/L	09/05/19 08:07	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates-R6
Pace Project No.: 2622320

QC Batch: 358894 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2622320001, 2622320002, 2622320003, 2622320004, 2622320005, 2622320006, 2622320007, 2622320008, 2622320009

METHOD BLANK: 1742552 Matrix: Water
Associated Lab Samples: 2622320001, 2622320002, 2622320003, 2622320004, 2622320005, 2622320006, 2622320007, 2622320008, 2622320009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.862 ± 0.415 (0.695) C:79% T:75%	pCi/L	09/16/19 12:47	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Yates-R6
Pace Project No.: 2622320

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates-R6
Pace Project No.: 2622320

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2622320001	**YGWA-39**	EPA 9315	359490		
2622320002	**YGWA-40**	EPA 9315	359490		
2622320003	**YGWC-38**	EPA 9315	359490		
2622320004	**YGWC-43**	EPA 9315	359490		
2622320005	**EB-1-8-22-19**	EPA 9315	359490		
2622320006	**YGWC-41**	EPA 9315	359490		
2622320007	**FB-1-8-22-19**	EPA 9315	359490		
2622320008	**YGWC-42**	EPA 9315	359490		
2622320009	**Dup-1**	EPA 9315	359490		
2622320001	**YGWA-39**	EPA 9320	358894		
2622320002	**YGWA-40**	EPA 9320	358894		
2622320003	**YGWC-38**	EPA 9320	358894		
2622320004	**YGWC-43**	EPA 9320	358894		
2622320005	**EB-1-8-22-19**	EPA 9320	358894		
2622320006	**YGWC-41**	EPA 9320	358894		
2622320007	**FB-1-8-22-19**	EPA 9320	358894		
2622320008	**YGWC-42**	EPA 9320	358894		
2622320009	**Dup-1**	EPA 9320	358894		
2622320001	**YGWA-39**	Total Radium Calculation	361776		
2622320002	**YGWA-40**	Total Radium Calculation	361776		
2622320003	**YGWC-38**	Total Radium Calculation	361776		
2622320004	**YGWC-43**	Total Radium Calculation	361776		
2622320005	**EB-1-8-22-19**	Total Radium Calculation	361776		
2622320006	**YGWC-41**	Total Radium Calculation	361776		
2622320007	**FB-1-8-22-19**	Total Radium Calculation	361776		
2622320008	**YGWC-42**	Total Radium Calculation	361776		
2622320009	**Dup-1**	Total Radium Calculation	361776		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

PAGE: ______ OF ______

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - R6

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. IV (EPA 6020/7470)	Flouride	Radium 226 & 228 (SW-846 9315/9320)	LAB I.D. NUMBER	REMARKS/ADDITIONAL INFORMATION
CONTAINER TYPE:							P	P	P		
PRESERVATION:							3	7	3		
8-21-19	1345	GW		X	YGWA-39	4	✓	✓	✓		
8-21-19	1445	GW		X	YGWA-40	4	✓	✓	✓		
8-22-19	1015	GW		X	YGWC-38	4	✓	✓	✓		
8-21-19	1230	GW		X	YGWC-43	4	✓	✓	✓		
8-22-19	1000	W		X	EB-1-8-22-19	4	✓	✓	✓		
8-22-19	1150	GW		X	YGWC-41	4	✓	✓	✓		
8-22-19	1310	W		X	FB-1-8-22-19	4	✓	✓	✓		
8-22-19	1335	GW		X	YGWC-42	6	✓	✓	✓		
—	—	GW		X	Dup-1	4	✓	✓	✓		

CONTAINER TYPE
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

***MATRIX CODES:**
DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

WO# : 2622320
2622320

SAMPLED BY AND TITLE: J Bensford ACC | DATE/TIME: 8-22-19 1535
RELINQUISHED BY: A Sawes ACC | DATE/TIME: 8-22-19 1630
RECEIVED BY: | DATE/TIME:
RELINQUISHED BY: | DATE/TIME:
RECEIVED BY LAB: [signature] | DATE/TIME: 8/22/19 1630

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT circled) OTHER FS

pH checked: (Yes circled) No NA | Ice: (Yes circled) No NA | Temperature: Min: 1.6°C Max: | Custody Seal: (Intact circled) Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP IV

Yates- R6- Blank COCs

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2622320

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

PM: BM Due Date: 09/20/19

CLIENT: GAPower-CCR

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.6 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C Comments:

Date and Initials of person examining contents: 8/22/19 MP

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Product Name: Low-Flow System

Date: 2019-08-21 13:46:51

Project Information:		Pump Information:	
Operator Name	J Berisford	Pump Model/Type	QED Bladder
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	R6	Tubing Diameter	.375 in
Site Name	Plant Yates	Tubing Length	68 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	63 ft

Well Information:		Pumping Information:	
Well ID	YGWA-39	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.961868 L
Well Total Depth	68.50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	23.0 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	13:25:16	900.03	20.56	6.04	114.71	1.55	23.40	0.12	68.43
Last 5	13:30:16	1200.03	20.31	6.04	112.52	1.30	23.40	0.13	68.33
Last 5	13:35:16	1500.02	20.21	6.03	109.35	1.72	23.40	0.15	67.78
Last 5	13:40:16	1800.02	20.49	5.99	106.78	1.53	23.40	0.15	69.78
Last 5	13:45:16	2100.03	20.42	5.96	105.09	1.22	23.40	0.16	70.85
Variance 0			-0.10	-0.01	-3.17			0.03	-0.54
Variance 1			0.29	-0.04	-2.57			-0.01	2.00
Variance 2			-0.07	-0.04	-1.69			0.01	1.07

Notes

Sunny, Sample time 1345

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-21 14:46:33

Project Information:		Pump Information:	
Operator Name	J Berisford	Pump Model/Type	QED Bladder
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	R6	Tubing Diameter	.375 in
Site Name	Plant Yates	Tubing Length	48 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	YGWA-40	Final Pumping Rate	160 mL/min
Well diameter	2 in	Total System Volume	1.527495 L
Well Total Depth	48.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4.8 in
Depth to Water	26.6 ft	Total Volume Pumped	5.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	14:25:06	900.03	27.61	5.32	102.92	0.72	27.00	5.10	94.25
Last 5	14:30:06	1200.03	25.22	5.26	102.98	0.62	27.00	5.19	98.89
Last 5	14:35:06	1500.03	26.28	5.28	105.71	0.88	27.00	5.14	98.93
Last 5	14:40:06	1800.03	26.64	5.26	107.39	0.71	27.00	5.22	100.65
Last 5	14:45:06	2100.03	28.01	5.26	107.31	0.55	27.00	5.14	101.99
Variance 0			1.05	0.01	2.73			-0.05	0.04
Variance 1			0.37	-0.02	1.68			0.08	1.72
Variance 2			1.36	-0.00	-0.08			-0.07	1.34

Notes

Sunny. Sample time-1445

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-22 10:16:07

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	QED Bladder
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	R6	Tubing Diameter	.375 in
Site Name	Plant Yates	Tubing Length	50.12 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	45.1 ft

Well Information:		Pumping Information:	
Well ID	YGWC-38	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	1.573538 L
Well Total Depth	50.12 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	3.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:50:01	300.09	20.74	4.85	1316.89	1.90	--	2.42	128.31
Last 5	09:55:01	600.03	19.99	4.83	1303.45	2.48	--	1.74	123.01
Last 5	10:00:01	900.02	19.77	4.82	1301.13	1.43	--	1.68	121.31
Last 5	10:05:01	1200.02	19.74	4.82	1295.00	1.11	--	1.79	119.72
Last 5	10:10:03	1502.03	19.92	4.81	1300.74	0.99	--	1.76	118.45
Variance 0			-0.22	-0.01	-2.32			-0.06	-1.69
Variance 1			-0.03	0.00	-6.13			0.11	-1.59
Variance 2			0.18	-0.00	5.74			-0.02	-1.27

Notes

Sampled at 1015. Sunny, 80s. Transducer in well, unable to obtain water level.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-22 11:53:18

Project Information:		Pump Information:	
Operator Name	A James	Pump Model/Type	QED Bladder
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	R6	Tubing Diameter	.375 in
Site Name	Plant Yates	Tubing Length	67.70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	62.7 ft

Well Information:		Pumping Information:	
Well ID	YGWC-41	Final Pumping Rate	220 mL/min
Well diameter	2 in	Total System Volume	1.955352 L
Well Total Depth	67.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7.8 in
Depth to Water	27.35 ft	Total Volume Pumped	4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	11:25:16	300.04	23.87	5.07	526.99	1.77	28.00	1.43	108.36
Last 5	11:30:16	600.03	20.30	4.90	565.92	2.02	28.00	2.53	108.35
Last 5	11:35:16	900.02	19.90	4.89	552.10	1.40	28.00	2.57	108.51
Last 5	11:40:16	1200.02	19.81	4.88	568.52	1.58	28.00	2.57	109.98
Last 5	11:45:18	1502.02	19.59	4.89	578.64	2.74	28.00	2.56	110.68
Variance 0			-0.40	-0.01	-13.82			0.04	0.16
Variance 1			-0.09	-0.01	16.43			0.00	1.47
Variance 2			-0.22	0.01	10.12			-0.01	0.71

Notes

Sampled at 1150. Sunny, 80s. DUP-1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-22 13:35:39

Project Information:		Pump Information:	
Operator Name	A James	Pump Model/Type	QED Bladder
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	R6	Tubing Diameter	.375 in
Site Name	Plant Yates	Tubing Length	60.0 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	55.0 ft

Well Information:		Pumping Information:	
Well ID	YGWC-42	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	1.788119 L
Well Total Depth	60.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	40.2 in
Depth to Water	28.65 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			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	13:10:33	900.05	19.85	5.68	1269.01	6.31	31.00	0.65	118.36
Last 5	13:15:33	1200.02	19.36	5.66	1278.60	5.38	31.00	0.47	117.38
Last 5	13:20:33	1500.02	19.27	5.65	1286.01	3.71	32.00	0.71	115.93
Last 5	13:25:34	1801.02	19.93	5.61	1280.42	3.53	32.00	0.75	115.60
Last 5	13:30:36	2103.02	19.38	5.61	1289.90	3.68	32.00	0.86	114.21
Variance 0			-0.09	-0.01	7.41			0.24	-1.45
Variance 1			0.66	-0.04	-5.59			0.05	-0.33
Variance 2			-0.55	-0.00	9.48			0.11	-1.39

Notes

Sampled at 1335. Sunny, 90s. Fb-1 at 1310 and second RAD here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-08-21 12:32:45

Project Information:		Pump Information:	
Operator Name	J Berisford	Pump Model/Type	QED Bladder
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	R6	Tubing Diameter	.375 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	501336		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWC-43	Final Pumping Rate	230 mL/min
Well diameter	2 in	Total System Volume	2.222492 L
Well Total Depth	80 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.3 in
Depth to Water	15.81 ft	Total Volume Pumped	6.9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	12:10:16	600.03	24.16	5.85	430.44	7.00	16.00	0.18	32.08
Last 5	12:15:16	900.03	24.10	5.81	441.70	4.44	16.00	0.11	34.56
Last 5	12:20:16	1200.03	24.05	5.83	442.88	1.77	16.00	0.09	35.41
Last 5	12:25:16	1500.03	23.58	5.84	445.06	1.38	16.00	0.08	36.29
Last 5	12:30:16	1800.02	23.97	5.84	446.55	1.11	16.00	0.08	36.02
Variance 0			-0.05	0.02	1.18			-0.02	0.84
Variance 1			-0.47	0.01	2.18			-0.01	0.88
Variance 2			0.39	0.00	1.49			0.00	-0.27

Notes

Sunny, Sample time 12:30

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 10/3/2019. The report has been revised to remove mercury data per consultant request. No other changes have been made to this report.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2623623001	**YGWA-21I**	Water	09/24/19 13:25	09/26/19 15:15
2623623002	**YGWA-5D**	Water	09/24/19 13:25	09/26/19 15:15
2623623003	**YGWA-5I**	Water	09/24/19 15:00	09/26/19 15:15
2623623004	**YGWA-4I**	Water	09/25/19 13:15	09/26/19 15:15
2623623005	**YGWA-17S**	Water	09/25/19 14:35	09/26/19 15:15
2623623006	**YGWA-20S**	Water	09/25/19 11:50	09/26/19 15:15
2623623007	**YGWA-18S**	Water	09/26/19 10:45	09/26/19 15:15
2623623008	**YGWA-18I**	Water	09/26/19 12:30	09/26/19 15:15
2623623009	**YGWC-33S**	Water	09/26/19 10:50	09/26/19 15:15
2623623010	**FB-1-9-25-19**	Water	09/25/19 09:45	09/26/19 15:15
2623623011	**EB-1-9-26-19**	Water	09/26/19 10:30	09/26/19 15:15
2623623012	**DUP-1**	Water	09/25/19 00:00	09/26/19 15:15
2623623013	**DUP-2**	Water	09/26/19 00:00	09/26/19 15:15

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2623623001	**YGWA-21I**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623002	**YGWA-5D**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623003	**YGWA-5I**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623004	**YGWA-4I**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623005	**YGWA-17S**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623006	**YGWA-20S**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623007	**YGWA-18S**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623008	**YGWA-18I**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623009	**YGWC-33S**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623010	**FB-1-9-25-19**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623011	**EB-1-9-26-19**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623012	**DUP-1**	EPA 6020B	CSW	12	PASI-GA
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2623623013	**DUP-2**	EPA 6020B	CSW	12	PASI-GA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-21I **Lab ID: 2623623001** Collected: 09/24/19 13:25 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0035**	mg/L	0.0030	0.00027	1	09/28/19 14:58	10/02/19 22:26	7440-36-0	
Arsenic	**0.0026J**	mg/L	0.0050	0.00035	1	09/28/19 14:58	10/02/19 22:26	7440-38-2	
Barium	**0.011**	mg/L	0.010	0.00049	1	09/28/19 14:58	10/02/19 22:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/28/19 14:58	10/02/19 22:26	7440-41-7	
Boron	**0.018J**	mg/L	0.040	0.0049	1	09/28/19 14:58	10/02/19 22:26	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/28/19 14:58	10/02/19 22:26	7440-43-9	
Calcium	**7.7**	mg/L	0.10	0.011	1	09/28/19 14:58	10/02/19 22:26	7440-70-2	
Cobalt	**0.0032J**	mg/L	0.0050	0.00030	1	09/28/19 14:58	10/02/19 22:26	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/28/19 14:58	10/02/19 22:26	7439-92-1	
Lithium	**0.0068J**	mg/L	0.030	0.00078	1	09/28/19 14:58	10/02/19 22:26	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/28/19 14:58	10/02/19 22:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/28/19 14:58	10/02/19 22:26	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**157**	mg/L	10.0	10.0	1		10/01/19 16:37		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**3.1**	mg/L	1.0	0.60	1		10/01/19 22:24	16887-00-6	
Fluoride	**0.15J**	mg/L	0.30	0.050	1		10/01/19 22:24	16984-48-8	
Sulfate	**1.0**	mg/L	1.0	0.50	1		10/01/19 22:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-5D **Lab ID: 2623623002** Collected: 09/24/19 13:25 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/28/19 14:58	10/02/19 22:49	7440-36-0	
Arsenic	**0.00043J**	mg/L	0.0050	0.00035	1	09/28/19 14:58	10/02/19 22:49	7440-38-2	
Barium	**0.0075J**	mg/L	0.010	0.00049	1	09/28/19 14:58	10/02/19 22:49	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/28/19 14:58	10/02/19 22:49	7440-41-7	
Boron	**0.010J**	mg/L	0.040	0.0049	1	09/28/19 14:58	10/02/19 22:49	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/28/19 14:58	10/02/19 22:49	7440-43-9	
Calcium	**25.8**	mg/L	5.0	0.55	50	09/28/19 14:58	10/02/19 22:55	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/28/19 14:58	10/02/19 22:49	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/28/19 14:58	10/02/19 22:49	7439-92-1	
Lithium	**0.0065J**	mg/L	0.030	0.00078	1	09/28/19 14:58	10/02/19 22:49	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/28/19 14:58	10/02/19 22:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/28/19 14:58	10/02/19 22:49	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**129**	mg/L	10.0	10.0	1		10/01/19 16:37		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**3.7**	mg/L	1.0	0.60	1		10/01/19 22:39	16887-00-6	
Fluoride	**0.050J**	mg/L	0.30	0.050	1		10/01/19 22:39	16984-48-8	
Sulfate	**5.5**	mg/L	1.0	0.50	1		10/01/19 22:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-5I **Lab ID: 2623623003** Collected: 09/24/19 15:00 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/28/19 14:58	10/02/19 23:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/28/19 14:58	10/02/19 23:00	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00049	1	09/28/19 14:58	10/02/19 23:00	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/28/19 14:58	10/02/19 23:00	7440-41-7	
Boron	**0.0049J**	mg/L	0.040	0.0049	1	09/28/19 14:58	10/02/19 23:00	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/28/19 14:58	10/02/19 23:00	7440-43-9	
Calcium	**2.5**	mg/L	0.10	0.011	1	09/28/19 14:58	10/02/19 23:00	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/28/19 14:58	10/02/19 23:00	7440-48-4	
Lead	**0.000090J**	mg/L	0.0050	0.000046	1	09/28/19 14:58	10/02/19 23:00	7439-92-1	
Lithium	**0.0031J**	mg/L	0.030	0.00078	1	09/28/19 14:58	10/02/19 23:00	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/28/19 14:58	10/02/19 23:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/28/19 14:58	10/02/19 23:00	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**79.0**	mg/L	10.0	10.0	1		10/01/19 16:37		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**4.5**	mg/L	1.0	0.60	1		10/01/19 22:53	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 22:53	16984-48-8	
Sulfate	**2.4**	mg/L	1.0	0.50	1		10/01/19 22:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-4I **Lab ID: 2623623004** Collected: 09/25/19 13:15 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/28/19 14:58	10/02/19 23:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/28/19 14:58	10/02/19 23:12	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00049	1	09/28/19 14:58	10/02/19 23:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/28/19 14:58	10/02/19 23:12	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	09/28/19 14:58	10/02/19 23:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/28/19 14:58	10/02/19 23:12	7440-43-9	
Calcium	**9.5**	mg/L	5.0	0.55	50	09/28/19 14:58	10/02/19 23:18	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/28/19 14:58	10/02/19 23:12	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/28/19 14:58	10/02/19 23:12	7439-92-1	
Lithium	**0.014J**	mg/L	0.030	0.00078	1	09/28/19 14:58	10/02/19 23:12	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/28/19 14:58	10/02/19 23:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/28/19 14:58	10/02/19 23:12	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**117**	mg/L	10.0	10.0	1		10/02/19 12:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**4.5**	mg/L	1.0	0.60	1		10/01/19 23:08	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 23:08	16984-48-8	
Sulfate	**8.5**	mg/L	1.0	0.50	1		10/01/19 23:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-17S **Lab ID: 2623623005** Collected: 09/25/19 14:35 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/28/19 14:58	10/02/19 23:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/28/19 14:58	10/02/19 23:23	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00049	1	09/28/19 14:58	10/02/19 23:23	7440-39-3	
Beryllium	**0.000081J**	mg/L	0.0030	0.000074	1	09/28/19 14:58	10/02/19 23:23	7440-41-7	
Boron	**0.0081J**	mg/L	0.040	0.0049	1	09/28/19 14:58	10/02/19 23:23	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/28/19 14:58	10/02/19 23:23	7440-43-9	
Calcium	**2.6**	mg/L	0.10	0.011	1	09/28/19 14:58	10/02/19 23:23	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/28/19 14:58	10/02/19 23:23	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/28/19 14:58	10/02/19 23:23	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	09/28/19 14:58	10/02/19 23:23	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/28/19 14:58	10/02/19 23:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/28/19 14:58	10/02/19 23:23	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**81.0**	mg/L	10.0	10.0	1		10/02/19 12:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**5.7**	mg/L	1.0	0.60	1		10/01/19 23:22	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 23:22	16984-48-8	
Sulfate	**5.5**	mg/L	1.0	0.50	1		10/01/19 23:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-20S **Lab ID: 2623623006** Collected: 09/25/19 11:50 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 18:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 18:53	7440-38-2	
Barium	**0.014**	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 18:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 18:53	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 18:53	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 18:53	7440-43-9	
Calcium	**2.4**	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 18:53	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 18:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 18:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 18:53	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 18:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 18:53	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**75.0**	mg/L	10.0	10.0	1		10/02/19 12:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**2.8**	mg/L	1.0	0.60	1		10/02/19 00:06	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 00:06	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/02/19 00:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-18S **Lab ID: 2623623007** Collected: 09/26/19 10:45 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 19:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 19:04	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 19:04	7440-39-3	
Beryllium	**0.000084J**	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 19:04	7440-41-7	
Boron	**0.0072J**	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 19:04	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 19:04	7440-43-9	
Calcium	**1.1**	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 19:04	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 19:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 19:04	7439-92-1	
Lithium	**0.0029J**	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 19:04	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 19:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 19:04	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**72.0**	mg/L	10.0	10.0	1		10/02/19 16:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.1**	mg/L	1.0	0.60	1		10/02/19 01:18	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 01:18	16984-48-8	
Sulfate	**1.0**	mg/L	1.0	0.50	1		10/02/19 01:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWA-18I **Lab ID: 2623623008** Collected: 09/26/19 12:30 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00056J**	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 20:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 20:13	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 20:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 20:13	7440-41-7	
Boron	**0.0062J**	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 20:13	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 20:13	7440-43-9	
Calcium	**4.9**	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 20:13	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 20:13	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 20:13	7439-92-1	
Lithium	**0.0032J**	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 20:13	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 20:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 20:13	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**126**	mg/L	10.0	10.0	1		10/02/19 16:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.0**	mg/L	1.0	0.60	1		10/02/19 01:32	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 01:32	16984-48-8	
Sulfate	**0.64J**	mg/L	1.0	0.50	1		10/02/19 01:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: YGWC-33S **Lab ID: 2623623009** Collected: 09/26/19 10:50 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 20:24	7440-36-0	
Arsenic	**0.0025J**	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 20:24	7440-38-2	
Barium	**0.010**	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 20:24	7440-39-3	
Beryllium	**0.019**	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 20:24	7440-41-7	
Boron	**9.6**	mg/L	2.0	0.25	50	09/30/19 12:43	10/01/19 20:30	7440-42-8	
Cadmium	**0.0023J**	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 20:24	7440-43-9	
Calcium	**117**	mg/L	5.0	0.55	50	09/30/19 12:43	10/01/19 20:30	7440-70-2	
Cobalt	**0.023**	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 20:24	7440-48-4	
Lead	**0.00087J**	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 20:24	7439-92-1	
Lithium	**0.028J**	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 20:24	7439-93-2	
Selenium	**0.011**	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 20:24	7782-49-2	
Thallium	**0.00014J**	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 20:24	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1070**	mg/L	10.0	10.0	1		10/02/19 16:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**4.5**	mg/L	1.0	0.60	1		10/02/19 01:47	16887-00-6	
Fluoride	**0.48**	mg/L	0.30	0.050	1		10/02/19 01:47	16984-48-8	
Sulfate	**532**	mg/L	13.0	6.5	13		10/02/19 10:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: FB-1-9-25-19 **Lab ID: 2623623010** Collected: 09/25/19 09:45 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 20:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 20:36	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 20:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 20:36	7440-41-7	
Boron	**0.0087J**	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 20:36	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 20:36	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 20:36	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 20:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 20:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 20:36	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 20:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 20:36	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**20.0**	mg/L	10.0	10.0	1		10/02/19 12:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	ND	mg/L	1.0	0.60	1		10/02/19 02:02	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 02:02	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/02/19 02:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: EB-1-9-26-19 **Lab ID: 2623623011** Collected: 09/26/19 10:30 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 20:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 20:41	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 20:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 20:41	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 20:41	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 20:41	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 20:41	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 20:41	7440-48-4	
Lead	**0.000064J**	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 20:41	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 20:41	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 20:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 20:41	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**16.0**	mg/L	10.0	10.0	1		10/02/19 16:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	ND	mg/L	1.0	0.60	1		10/02/19 02:20	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 02:20	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/02/19 02:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: DUP-1 **Lab ID: 2623623012** Collected: 09/25/19 00:00 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 20:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 20:59	7440-38-2	
Barium	**0.015**	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 20:59	7440-39-3	
Beryllium	**0.000082J**	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 20:59	7440-41-7	
Boron	**0.0092J**	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 20:59	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 20:59	7440-43-9	
Calcium	**2.4**	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 20:59	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 20:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 20:59	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 20:59	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 20:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 20:59	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**81.0**	mg/L	10.0	10.0	1		10/02/19 12:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**5.6**	mg/L	1.0	0.60	1		10/02/19 02:34	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 02:34	16984-48-8	
Sulfate	**5.3**	mg/L	1.0	0.50	1		10/02/19 02:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Sample: DUP-2 **Lab ID: 2623623013** Collected: 09/26/19 00:00 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	09/30/19 12:43	10/01/19 21:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	09/30/19 12:43	10/01/19 21:10	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00049	1	09/30/19 12:43	10/01/19 21:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	09/30/19 12:43	10/01/19 21:10	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	09/30/19 12:43	10/01/19 21:10	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	09/30/19 12:43	10/01/19 21:10	7440-43-9	
Calcium	**5.0**	mg/L	0.10	0.011	1	09/30/19 12:43	10/01/19 21:10	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	09/30/19 12:43	10/01/19 21:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	09/30/19 12:43	10/01/19 21:10	7439-92-1	
Lithium	**0.0031J**	mg/L	0.030	0.00078	1	09/30/19 12:43	10/01/19 21:10	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	09/30/19 12:43	10/01/19 21:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	09/30/19 12:43	10/01/19 21:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**122**	mg/L	10.0	10.0	1		10/02/19 16:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.0**	mg/L	1.0	0.60	1		10/02/19 02:49	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/02/19 02:49	16984-48-8	
Sulfate	**0.70J**	mg/L	1.0	0.50	1		10/02/19 02:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 36136 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2623623001, 2623623002, 2623623003, 2623623004, 2623623005

METHOD BLANK: 163251 Matrix: Water
Associated Lab Samples: 2623623001, 2623623002, 2623623003, 2623623004, 2623623005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	10/02/19 18:26	
Arsenic	mg/L	ND	0.0050	0.00035	10/02/19 18:26	
Barium	mg/L	ND	0.010	0.00049	10/02/19 18:26	
Beryllium	mg/L	ND	0.0030	0.000074	10/02/19 18:26	
Boron	mg/L	ND	0.040	0.0049	10/02/19 18:26	
Cadmium	mg/L	ND	0.0025	0.00011	10/02/19 18:26	
Calcium	mg/L	ND	0.10	0.011	10/02/19 18:26	
Cobalt	mg/L	ND	0.0050	0.00030	10/02/19 18:26	
Lead	mg/L	ND	0.0050	0.000046	10/02/19 18:26	
Lithium	mg/L	ND	0.030	0.00078	10/02/19 18:26	
Selenium	mg/L	ND	0.010	0.0013	10/02/19 18:26	
Thallium	mg/L	ND	0.0010	0.000052	10/02/19 18:26	

LABORATORY CONTROL SAMPLE: 163252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163253 163254

Parameter	Units	2623567001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	105	102	75-125	2	20	
Barium	mg/L	0.053	0.1	0.1	0.16	0.16	107	108	75-125	1	20	
Beryllium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20	
Boron	mg/L	2.8	1	1	3.8	4.2	101	139	75-125	10	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163253 163254

Parameter	Units	2623567001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	0.00020J	0.1	0.1	0.10	0.098	102	98	75-125	4	20	
Calcium	mg/L	113	1	1	105	114	-820	112	75-125	9	20	M6
Cobalt	mg/L	0.0015J	0.1	0.1	0.10	0.10	102	102	75-125	0	20	
Lead	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	
Lithium	mg/L	0.0024J	0.1	0.1	0.10	0.10	98	98	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	103	101	75-125	2	20	
Thallium	mg/L	0.00011J	0.1	0.1	0.099	0.098	99	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 36170 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2623623006, 2623623007, 2623623008, 2623623009, 2623623010, 2623623011, 2623623012, 2623623013

METHOD BLANK: 163336 Matrix: Water
Associated Lab Samples: 2623623006, 2623623007, 2623623008, 2623623009, 2623623010, 2623623011, 2623623012, 2623623013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	10/01/19 18:14	
Arsenic	mg/L	ND	0.0050	0.00035	10/01/19 18:14	
Barium	mg/L	ND	0.010	0.00049	10/01/19 18:14	
Beryllium	mg/L	ND	0.0030	0.000074	10/01/19 18:14	
Boron	mg/L	ND	0.040	0.0049	10/01/19 18:14	
Cadmium	mg/L	ND	0.0025	0.00011	10/01/19 18:14	
Calcium	mg/L	ND	0.10	0.011	10/01/19 18:14	
Cobalt	mg/L	ND	0.0050	0.00030	10/01/19 18:14	
Lead	mg/L	ND	0.0050	0.000046	10/01/19 18:14	
Lithium	mg/L	ND	0.030	0.00078	10/01/19 18:14	
Selenium	mg/L	ND	0.010	0.0013	10/01/19 18:14	
Thallium	mg/L	ND	0.0010	0.000052	10/01/19 18:14	

LABORATORY CONTROL SAMPLE: 163337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Calcium	mg/L	1	0.98	98	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163338 163339

Parameter	Units	2623623007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	105	102	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20	
Barium	mg/L	0.017	0.1	0.1	0.13	0.12	109	106	75-125	3	20	
Beryllium	mg/L	0.000084J	0.1	0.1	0.10	0.093	102	93	75-125	9	20	
Boron	mg/L	0.0072J	1	1	1.0	0.95	100	94	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163338 163339

Parameter	Units	2623623007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	2	20	
Calcium	mg/L	1.1	1	1	2.1	2.1	97	94	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	104	100	75-125	4	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.098	99	98	75-125	2	20	
Lithium	mg/L	0.0029J	0.1	0.1	0.10	0.097	102	94	75-125	7	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.098	102	98	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 36262 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2623623001, 2623623002, 2623623003

LABORATORY CONTROL SAMPLE: 163778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	357	89	84-108	

SAMPLE DUPLICATE: 163780

Parameter	Units	2623620001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	146	139	5	10	

SAMPLE DUPLICATE: 163844

Parameter	Units	2623559001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	133	124	7	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 36325 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2623623004, 2623623005, 2623623006, 2623623010, 2623623012

LABORATORY CONTROL SAMPLE: 164004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	421	105	84-108	

SAMPLE DUPLICATE: 164005

Parameter	Units	2623620005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	159	152	5	10	

SAMPLE DUPLICATE: 164006

Parameter	Units	2623623005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	81.0	83.0	2	10	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 36344 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2623623007, 2623623008, 2623623009, 2623623011, 2623623013

LABORATORY CONTROL SAMPLE: 164074

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	419	105	84-108	

SAMPLE DUPLICATE: 164075

Parameter	Units	2623639001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	503	491	2	10	

SAMPLE DUPLICATE: 164076

Parameter	Units	2623623008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	126	119	6	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 500861 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2623623001, 2623623002, 2623623003, 2623623004, 2623623005

METHOD BLANK: 2694298 Matrix: Water
Associated Lab Samples: 2623623001, 2623623002, 2623623003, 2623623004, 2623623005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/19 16:22	
Fluoride	mg/L	ND	0.10	0.050	10/01/19 16:22	
Sulfate	mg/L	ND	1.0	0.50	10/01/19 16:22	

LABORATORY CONTROL SAMPLE: 2694299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.2	98	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	
Sulfate	mg/L	50	50.4	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694300 2694301

Parameter	Units	2623559001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.7	50	50	53.7	53.7	104	104	90-110	0	10	
Fluoride	mg/L	0.058J	2.5	2.5	2.5	2.5	98	99	90-110	1	10	
Sulfate	mg/L	20.7	50	50	72.4	72.6	103	104	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694302 2694303

Parameter	Units	2623584001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	89.4	50	50	132	133	86	87	90-110	1	10	M1
Fluoride	mg/L	0.42	2.5	2.5	4.2	4.3	152	153	90-110	1	10	M1
Sulfate	mg/L	142	50	50	177	180	69	74	90-110	2	10	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

QC Batch: 500862 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2623623006, 2623623007, 2623623008, 2623623009, 2623623010, 2623623011, 2623623012, 2623623013

METHOD BLANK: 2694304 Matrix: Water
Associated Lab Samples: 2623623006, 2623623007, 2623623008, 2623623009, 2623623010, 2623623011, 2623623012, 2623623013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/02/19 11:06	
Fluoride	mg/L	ND	0.10	0.050	10/02/19 11:06	
Sulfate	mg/L	ND	1.0	0.50	10/02/19 11:06	

LABORATORY CONTROL SAMPLE: 2694305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.4	99	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694306 2694307

Parameter	Units	2623623006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.8	50	50	54.3	54.8	103	104	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	98	99	90-110	1	10	
Sulfate	mg/L	ND	50	50	51.6	51.9	103	104	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694308 2694309

Parameter	Units	2623620003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	50	50	53.2	50.5	104	98	90-110	5	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.3	96	92	90-110	5	10	
Sulfate	mg/L	4.3	50	50	56.1	53.4	104	98	90-110	5	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates - Ash Pond 3
Pace Project No.: 2623623

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2623623001	YGWA-21I	EPA 3005A	36136	EPA 6020B	36312
2623623002	YGWA-5D	EPA 3005A	36136	EPA 6020B	36312
2623623003	YGWA-5I	EPA 3005A	36136	EPA 6020B	36312
2623623004	YGWA-4I	EPA 3005A	36136	EPA 6020B	36312
2623623005	YGWA-17S	EPA 3005A	36136	EPA 6020B	36312
2623623006	YGWA-20S	EPA 3005A	36170	EPA 6020B	36202
2623623007	YGWA-18S	EPA 3005A	36170	EPA 6020B	36202
2623623008	YGWA-18I	EPA 3005A	36170	EPA 6020B	36202
2623623009	YGWC-33S	EPA 3005A	36170	EPA 6020B	36202
2623623010	FB-1-9-25-19	EPA 3005A	36170	EPA 6020B	36202
2623623011	EB-1-9-26-19	EPA 3005A	36170	EPA 6020B	36202
2623623012	DUP-1	EPA 3005A	36170	EPA 6020B	36202
2623623013	DUP-2	EPA 3005A	36170	EPA 6020B	36202
2623623001	YGWA-21I	SM 2540C	36262		
2623623002	YGWA-5D	SM 2540C	36262		
2623623003	YGWA-5I	SM 2540C	36262		
2623623004	YGWA-4I	SM 2540C	36325		
2623623005	YGWA-17S	SM 2540C	36325		
2623623006	YGWA-20S	SM 2540C	36325		
2623623007	YGWA-18S	SM 2540C	36344		
2623623008	YGWA-18I	SM 2540C	36344		
2623623009	YGWC-33S	SM 2540C	36344		
2623623010	FB-1-9-25-19	SM 2540C	36325		
2623623011	EB-1-9-26-19	SM 2540C	36344		
2623623012	DUP-1	SM 2540C	36325		
2623623013	DUP-2	SM 2540C	36344		
2623623001	YGWA-21I	EPA 300.0 Rev 2.1 1993	500861		
2623623002	YGWA-5D	EPA 300.0 Rev 2.1 1993	500861		
2623623003	YGWA-5I	EPA 300.0 Rev 2.1 1993	500861		
2623623004	YGWA-4I	EPA 300.0 Rev 2.1 1993	500861		
2623623005	YGWA-17S	EPA 300.0 Rev 2.1 1993	500861		
2623623006	YGWA-20S	EPA 300.0 Rev 2.1 1993	500862		
2623623007	YGWA-18S	EPA 300.0 Rev 2.1 1993	500862		
2623623008	YGWA-18I	EPA 300.0 Rev 2.1 1993	500862		
2623623009	YGWC-33S	EPA 300.0 Rev 2.1 1993	500862		
2623623010	FB-1-9-25-19	EPA 300.0 Rev 2.1 1993	500862		
2623623011	EB-1-9-26-19	EPA 300.0 Rev 2.1 1993	500862		
2623623012	DUP-1	EPA 300.0 Rev 2.1 1993	500862		
2623623013	DUP-2	EPA 300.0 Rev 2.1 1993	500862		

REPORT OF LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020B) Boron, Calcium	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
					CONTAINER TYPE:		P	P		P	
					PRESERVATION:		3	7		3	
9-24-19	1325	GW		✓	YGWA-21I	4	✓	✓	✓	✓	
9-24-19	1325	GW		✓	YGWA-5D	4	✓	✓	✓	✓	
9-24-19	1500	GW		✓	YGWA-5I	4	✓	✓	✓	✓	
9-25-19	1315	GW		✓	YGWA-4I	4	✓	✓	✓	✓	
9-25-19	1435	GW		✓	YGWA-17S	4	✓	✓	✓	✓	
9-25-19	1150	GW		✓	YGWA-20S	4	✓	✓	✓	✓	
9-26-19	1045	GW		✓	YGWA-18S	4	✓	✓	✓	2	
9-26-19	1230	GW		✓	YGWA-18I	4	✓	✓	✓	✓	
9-26-19	1050	GW		✓	YGWL-33S	4	✓	✓	✓	✓	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

9/25/19

9/25/19

WO#: 2623623

2623623

SAMPLED BY AND TITLE: ACC	DATE/TIME: See above	RELINQUISHED BY:	DATE/TIME: 9-26-19 1515
RECEIVED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:
RECEIVED BY LAB: M Dahlman	DATE/TIME: 09/26/19 1515	SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS	FOR LAB USE ONLY
pH checked: Yes No NA	Ice: Yes No NA	Custody Seal: Intact Broken Not Present	# of Coolers: Cooler ID:
	Temperature: Min: 0.2 Max:		LAB #: Entered into LIMS: Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III ~~(EPA 6020/7470)~~ Boron, Calcium (P, 3)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C) (P, 7)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320) (P, 3)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
9-25-19	0945	W		✓	EB-1-9-25-19	4	✓	✓	✓	✓		APP III plus detected APP IV
9-26-19	1030	W		✓	EB-1-9-26-19	4	✓	✓	✓	✓		
9-25-19	—	GW		✓	DUP-1	4	✓	✓	✓	✓		
9-26-19	—	GW		✓	DUP-2	4	✓	✓	✓	✓		

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

WO#: 2623623
PM: BM Due Date: 10/03/19
CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: [signature] ACC | DATE/TIME: See above

RELINQUISHED BY: [signature] | DATE/TIME: 9-26-19 / 1515

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: M Lalman | DATE/TIME: 09/26/19 1515

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS

pH checked: (Yes) No NA | Ice: (Yes) No NA | Temperature: Min: 1.2 Max: | Custody Seal: (Intact) Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**
Bolded Detections: Listed above or included with App III

2019-0? Yates Ash Pond 3 - Blank COCs (1)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

2623623-002 WO#:2623623
SAMP ID: YGWA-5D
PROJ: Plant Yates - Ash Pond 3
CLIENT: GAPower-CCR
ACCODES: 2948C W
COLLECTED AT: 09/24/18 13:25
RECEIVED AT: 09/26/18 15:15
239043 2623623002 BP3U1/1

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 3B Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/26/19 MK

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:	AQ	
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

October 29, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2623624001	**YGWA-21I**	Water	09/24/19 13:25	09/26/19 15:15
2623624002	**YGWA-5D**	Water	09/24/19 13:25	09/26/19 15:15
2623624003	**YGWA-5I**	Water	09/24/19 15:00	09/26/19 15:15
2623624004	**YGWA-4I**	Water	09/25/19 13:15	09/26/19 15:15
2623624005	**YGWA-17S**	Water	09/25/19 14:35	09/26/19 15:15
2623624006	**YGWA-20S**	Water	09/25/19 11:50	09/26/19 15:15
2623624007	**YGWA-18S**	Water	09/26/19 10:45	09/26/19 15:15
2623624008	**YGWA-18I**	Water	09/26/19 12:30	09/26/19 15:15
2623624009	**YGWC-33S**	Water	09/26/19 10:50	09/26/19 15:15
2623624010	**FB-1-9-25-19**	Water	09/25/19 09:45	09/26/19 15:15
2623624011	**EB-1-9-26-19**	Water	09/26/19 10:30	09/26/19 15:15
2623624012	**DUP-1**	Water	09/25/19 00:00	09/26/19 15:15
2623624013	**DUP-2**	Water	09/26/19 00:00	09/26/19 15:15

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SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2623624001	YGWA-21I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624002	YGWA-5D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624003	YGWA-5I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624004	YGWA-4I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624005	YGWA-17S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624006	YGWA-20S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624007	YGWA-18S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624008	YGWA-18I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624009	YGWC-33S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624010	FB-1-9-25-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624011	EB-1-9-26-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624012	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623624013	DUP-2	EPA 9315	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-21I **Lab ID: 2623624001** Collected: 09/24/19 13:25 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.714 ± 0.340 (0.364) C:85% T:NA**	pCi/L	10/16/19 07:52	13982-63-3	
Radium-228	EPA 9320	**0.638 ± 0.409 (0.759) C:71% T:77%**	pCi/L	10/22/19 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.35 ± 0.749 (1.12)**	pCi/L	10/24/19 12:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-5D **Lab ID: 2623624002** Collected: 09/24/19 13:25 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**3.13 ± 0.763 (0.326) C:92% T:NA**	pCi/L	10/16/19 07:52	13982-63-3	
Radium-228	EPA 9320	**0.934 ± 0.431 (0.715) C:76% T:80%**	pCi/L	10/22/19 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**4.06 ± 1.19 (1.04)**	pCi/L	10/24/19 12:46	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-5I **Lab ID: 2623624003** Collected: 09/24/19 15:00 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.426 ± 0.271 (0.402) C:95% T:NA**	pCi/L	10/16/19 07:52	13982-63-3	
Radium-228	EPA 9320	**0.273 ± 0.348 (0.739) C:69% T:91%**	pCi/L	10/22/19 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**0.699 ± 0.619 (1.14)**	pCi/L	10/24/19 12:53	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-4I **Lab ID: 2623624004** Collected: 09/25/19 13:15 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**1.20 ± 0.415 (0.306) C:96% T:NA**	pCi/L	10/16/19 07:53	13982-63-3	
Radium-228	EPA 9320	**0.664 ± 0.389 (0.708) C:71% T:88%**	pCi/L	10/22/19 15:59	15262-20-1	
Total Radium	Total Radium Calculation	**1.86 ± 0.804 (1.01)**	pCi/L	10/24/19 12:53	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-17S **Lab ID: 2623624005** Collected: 09/25/19 14:35 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.152 ± 0.234 (0.514) C:84% T:NA**	pCi/L	10/16/19 07:53	13982-63-3	
Radium-228	EPA 9320	**0.260 ± 0.365 (0.784) C:76% T:90%**	pCi/L	10/22/19 14:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.412 ± 0.599 (1.30)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-20S **Lab ID: 2623624006** Collected: 09/25/19 11:50 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.649 ± 0.336 (0.374) C:85% T:NA**	pCi/L	10/16/19 07:53	13982-63-3	
Radium-228	EPA 9320	**0.535 ± 0.432 (0.866) C:72% T:91%**	pCi/L	10/22/19 14:23	15262-20-1	
Total Radium	Total Radium Calculation	**1.18 ± 0.768 (1.24)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-18S **Lab ID: 2623624007** Collected: 09/26/19 10:45 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.109 ± 0.162 (0.341) C:91% T:NA**	pCi/L	10/16/19 09:12	13982-63-3	
Radium-228	EPA 9320	**0.113 ± 0.406 (0.919) C:69% T:88%**	pCi/L	10/22/19 14:23	15262-20-1	
Total Radium	Total Radium Calculation	**0.222 ± 0.568 (1.26)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWA-18I **Lab ID: 2623624008** Collected: 09/26/19 12:30 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.386 ± 0.349 (0.673) C:85% T:NA**	pCi/L	10/16/19 07:54	13982-63-3	
Radium-228	EPA 9320	**-0.0268 ± 0.417 (0.972) C:72% T:84%**	pCi/L	10/22/19 14:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.386 ± 0.766 (1.65)**	pCi/L	10/23/19 10:22	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: YGWC-33S **Lab ID: 2623624009** Collected: 09/26/19 10:50 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.812 ± 0.371 (0.417) C:94% T:NA**	pCi/L	10/16/19 07:54	13982-63-3	
Radium-228	EPA 9320	**0.265 ± 0.541 (1.19) C:71% T:87%**	pCi/L	10/22/19 14:24	15262-20-1	
Total Radium	Total Radium Calculation	**1.08 ± 0.912 (1.61)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: FB-1-9-25-19 **Lab ID: 2623624010** Collected: 09/25/19 09:45 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.387 ± 0.273 (0.424) C:94% T:NA**	pCi/L	10/16/19 07:54	13982-63-3	
Radium-228	EPA 9320	**-0.194 ± 0.411 (1.00) C:68% T:86%**	pCi/L	10/22/19 14:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.387 ± 0.684 (1.42)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: EB-1-9-26-19 **Lab ID: 2623624011** Collected: 09/26/19 10:30 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.378 ± 0.257 (0.370) C:93% T:NA**	pCi/L	10/16/19 09:11	13982-63-3	
Radium-228	EPA 9320	**0.217 ± 0.391 (0.855) C:71% T:90%**	pCi/L	10/22/19 14:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.595 ± 0.648 (1.23)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: DUP-1 **Lab ID: 2623624012** Collected: 09/25/19 00:00 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.256 ± 0.223 (0.363) C:83% T:NA**	pCi/L	10/16/19 09:59	13982-63-3	
Radium-228	EPA 9320	**0.0393 ± 0.399 (0.918) C:70% T:88%**	pCi/L	10/22/19 14:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.295 ± 0.622 (1.28)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Sample: DUP-2 **Lab ID: 2623624013** Collected: 09/26/19 00:00 Received: 09/26/19 15:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.584 ± 0.321 (0.419) C:91% T:NA**	pCi/L	10/16/19 08:26	13982-63-3	
Radium-228	EPA 9320	**0.188 ± 0.376 (0.829) C:70% T:89%**	pCi/L	10/22/19 14:24	15262-20-1	
Total Radium	Total Radium Calculation	**0.772 ± 0.697 (1.25)**	pCi/L	10/23/19 10:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

QC Batch: 365382 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2623624001, 2623624002, 2623624003, 2623624004

METHOD BLANK: 1772187 Matrix: Water
Associated Lab Samples: 2623624001, 2623624002, 2623624003, 2623624004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.573 ± 0.379 (0.723) C:78% T:84%	pCi/L	10/22/19 15:57	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

QC Batch: 365558 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2623624005, 2623624006, 2623624007, 2623624008, 2623624009, 2623624010, 2623624011, 2623624012, 2623624013

METHOD BLANK: 1773085 Matrix: Water
Associated Lab Samples: 2623624005, 2623624006, 2623624007, 2623624008, 2623624009, 2623624010, 2623624011, 2623624012, 2623624013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.522 ± 0.298 (0.379) C:86% T:NA	pCi/L	10/16/19 07:53	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

QC Batch: 365559 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2623624005, 2623624006, 2623624007, 2623624008, 2623624009, 2623624010, 2623624011, 2623624012, 2623624013

METHOD BLANK: 1773086 Matrix: Water
Associated Lab Samples: 2623624005, 2623624006, 2623624007, 2623624008, 2623624009, 2623624010, 2623624011, 2623624012, 2623624013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0794 ± 0.355 (0.809) C:69% T:86%	pCi/L	10/22/19 14:24	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

QC Batch: 365379 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2623624001, 2623624002, 2623624003, 2623624004

METHOD BLANK: 1772184 Matrix: Water
Associated Lab Samples: 2623624001, 2623624002, 2623624003, 2623624004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.298 ± 0.261 (0.477) C:93% T:NA	pCi/L	10/16/19 08:22	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates - Ash Pond 3 RAD
Pace Project No.: 2623624

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2623624001	**YGWA-21I**	EPA 9315	365379		
2623624002	**YGWA-5D**	EPA 9315	365379		
2623624003	**YGWA-5I**	EPA 9315	365379		
2623624004	**YGWA-4I**	EPA 9315	365379		
2623624005	**YGWA-17S**	EPA 9315	365558		
2623624006	**YGWA-20S**	EPA 9315	365558		
2623624007	**YGWA-18S**	EPA 9315	365558		
2623624008	**YGWA-18I**	EPA 9315	365558		
2623624009	**YGWC-33S**	EPA 9315	365558		
2623624010	**FB-1-9-25-19**	EPA 9315	365558		
2623624011	**EB-1-9-26-19**	EPA 9315	365558		
2623624012	**DUP-1**	EPA 9315	365558		
2623624013	**DUP-2**	EPA 9315	365558		
2623624001	**YGWA-21I**	EPA 9320	365382		
2623624002	**YGWA-5D**	EPA 9320	365382		
2623624003	**YGWA-5I**	EPA 9320	365382		
2623624004	**YGWA-4I**	EPA 9320	365382		
2623624005	**YGWA-17S**	EPA 9320	365559		
2623624006	**YGWA-20S**	EPA 9320	365559		
2623624007	**YGWA-18S**	EPA 9320	365559		
2623624008	**YGWA-18I**	EPA 9320	365559		
2623624009	**YGWC-33S**	EPA 9320	365559		
2623624010	**FB-1-9-25-19**	EPA 9320	365559		
2623624011	**EB-1-9-26-19**	EPA 9320	365559		
2623624012	**DUP-1**	EPA 9320	365559		
2623624013	**DUP-2**	EPA 9320	365559		
2623624001	**YGWA-21I**	Total Radium Calculation	367752		
2623624002	**YGWA-5D**	Total Radium Calculation	367752		
2623624003	**YGWA-5I**	Total Radium Calculation	367753		
2623624004	**YGWA-4I**	Total Radium Calculation	367753		
2623624005	**YGWA-17S**	Total Radium Calculation	367488		
2623624006	**YGWA-20S**	Total Radium Calculation	367488		
2623624007	**YGWA-18S**	Total Radium Calculation	367488		
2623624008	**YGWA-18I**	Total Radium Calculation	367488		
2623624009	**YGWC-33S**	Total Radium Calculation	367488		
2623624010	**FB-1-9-25-19**	Total Radium Calculation	367488		
2623624011	**EB-1-9-26-19**	Total Radium Calculation	367488		
2623624012	**DUP-1**	Total Radium Calculation	367488		
2623624013	**DUP-2**	Total Radium Calculation	367488		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO4, & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/8320)
					CONTAINER TYPE:		P	P		P
					PRESERVATION:		3	7		3
9-24-19	1325	GW		✓	YGWA-21I	4	✓	✓	✓	✓
9-24-19	1325	GW		✓	YGWA-5D	4	✓	✓	✓	✓
9-24-19	1500	GW		✓	YGWA-5I	4	✓	✓	✓	✓
9-25-19	1315	GW		✓	YGWA-4I	4	✓	✓	✓	✓
9-25-19	1435	GW		✓	YGWA-17S	4	✓	✓	✓	✓
9-25-19	1150	GW		✓	YGWA-20S	4	✓	✓	✓	✓
9-26-19	1045	GW		✓	YGWA-18S	4	✓	✓	✓	✓
9-26-19	1230	GW		✓	YGWA-18I	4	✓	✓	✓	✓
9-26-19	1050	GW		✓	YGWL-33S	4	✓	✓	✓	✓

LAB ID NUMBER

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES: DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

9/25/19

9/25/19

WO#: 2623624

2623624

SAMPLED BY AND TITLE: [signature] ALL | DATE/TIME: See above

RELINQUISHED BY: [signature] | DATE/TIME: 9-26-19 1515

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY LAB: M Lakmani | DATE/TIME: 09/26/19 1575

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 0.2 Max:

Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
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404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)
					CONTAINER TYPE:	P	P		P	
					PRESERVATION:	3	7		3	
9-25-19	0945	W		✓	FB-1-9-25-19	4	✓	✓	✓	✓
9-26-19	1030	W		✓	EB-1-9-26-19	4	✓	✓	✓	✓
9-25-19	—	GW		✓	DUP-1	4	✓	✓	✓	✓
9-26-19	—	GW		✓	DUP-2	4	✓	✓	✓	✓

LAB ID NUMBER

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO#: 2623624

PM: BM Due Date: 10/24/19

CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: AC | DATE/TIME: see above

RECEIVED BY: | DATE/TIME:

RECEIVED BY LAB: M Zalman | DATE/TIME: 09/26/19 1515

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 1.2 Max:

RELINQUISHED BY: | DATE/TIME: 9-26-19 1515

RELINQUISHED BY: | DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER | CLIENT OTHER FS

Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered Into LIMS:

Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

2019-09 Yates Ash Pond 3 - Blank COCs (1)

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Powere

Project #

WO# : 2623624

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

PM: BM Due Date: 10/24/19

CLIENT: GAPower-CCR

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/26/19 MR

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: WO	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 10/7/2019. The report has been revised to remove mercury data per consultant request. No other changes have been made to this report.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2623702001	**YGWC-23S**	Water	09/27/19 09:15	09/27/19 15:35
2623702002	**YGWC-24S**	Water	09/26/19 14:50	09/27/19 15:35
2623702003	**YGWC-36**	Water	09/26/19 13:15	09/27/19 15:35
2623702004	**EB-2-9-26-19**	Water	09/26/19 15:52	09/27/19 15:35
2623702005	**FB-2-9-26**	Water	09/26/19 13:00	09/27/19 15:35
2623702006	**YGWC-49**	Water	09/26/19 16:45	09/27/19 15:35

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2623702001	**YGWC-23S**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2623702002	**YGWC-24S**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2623702003	**YGWC-36**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2623702004	**EB-2-9-26-19**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2623702005	**FB-2-9-26**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2623702006	**YGWC-49**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Sample: YGWC-23S **Lab ID: 2623702001** Collected: 09/27/19 09:15 Received: 09/27/19 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.00029J**	mg/L	0.0030	0.00027	1	10/01/19 12:00	10/03/19 19:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/01/19 12:00	10/03/19 19:19	7440-38-2	
Barium	**0.018**	mg/L	0.010	0.00049	1	10/01/19 12:00	10/03/19 19:19	7440-39-3	
Beryllium	**0.000077J**	mg/L	0.0030	0.000074	1	10/01/19 12:00	10/03/19 19:19	7440-41-7	
Boron	**0.58**	mg/L	0.040	0.0049	1	10/01/19 12:00	10/03/19 19:19	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/01/19 12:00	10/03/19 19:19	7440-43-9	
Calcium	**3.7**	mg/L	0.10	0.011	1	10/01/19 12:00	10/03/19 19:19	7440-70-2	M1
Cobalt	ND	mg/L	0.0050	0.00030	1	10/01/19 12:00	10/03/19 19:19	7440-48-4	
Lead	**0.00013J**	mg/L	0.0050	0.000046	1	10/01/19 12:00	10/03/19 19:19	7439-92-1	
Lithium	**0.0017J**	mg/L	0.030	0.00078	1	10/01/19 12:00	10/03/19 19:19	7439-93-2	
Selenium	**0.018**	mg/L	0.010	0.0013	1	10/01/19 12:00	10/03/19 19:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/01/19 12:00	10/03/19 19:19	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**96.0**	mg/L	10.0	10.0	1		10/03/19 20:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.7**	mg/L	1.0	0.024	1		10/02/19 08:19	16887-00-6	
Fluoride	**0.12J**	mg/L	0.30	0.029	1		10/02/19 08:19	16984-48-8	
Sulfate	**30.3**	mg/L	1.0	0.017	1		10/02/19 08:19	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Sample: YGWC-24S **Lab ID: 2623702002** Collected: 09/26/19 14:50 Received: 09/27/19 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/01/19 12:00	10/03/19 20:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/01/19 12:00	10/03/19 20:10	7440-38-2	
Barium	**0.017**	mg/L	0.010	0.00049	1	10/01/19 12:00	10/03/19 20:10	7440-39-3	
Beryllium	**0.00014J**	mg/L	0.0030	0.000074	1	10/01/19 12:00	10/03/19 20:10	7440-41-7	
Boron	**0.0068J**	mg/L	0.040	0.0049	1	10/01/19 12:00	10/03/19 20:10	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/01/19 12:00	10/03/19 20:10	7440-43-9	
Calcium	**1.7**	mg/L	0.10	0.011	1	10/01/19 12:00	10/03/19 20:10	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/01/19 12:00	10/03/19 20:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/01/19 12:00	10/03/19 20:10	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/01/19 12:00	10/03/19 20:10	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	10/01/19 12:00	10/03/19 20:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/01/19 12:00	10/03/19 20:10	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**81.0**	mg/L	10.0	10.0	1		10/03/19 16:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.5**	mg/L	1.0	0.024	1		10/02/19 09:25	16887-00-6	
Fluoride	**0.098J**	mg/L	0.30	0.029	1		10/02/19 09:25	16984-48-8	
Sulfate	**0.23J**	mg/L	1.0	0.017	1		10/02/19 09:25	14808-79-8	B

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Sample: YGWC-36 **Lab ID: 2623702003** Collected: 09/26/19 13:15 Received: 09/27/19 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0065**	mg/L	0.0030	0.00027	1	10/01/19 12:00	10/03/19 20:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/01/19 12:00	10/03/19 20:21	7440-38-2	
Barium	**0.025**	mg/L	0.010	0.00049	1	10/01/19 12:00	10/03/19 20:21	7440-39-3	
Beryllium	**0.00029J**	mg/L	0.0030	0.000074	1	10/01/19 12:00	10/03/19 20:21	7440-41-7	
Boron	**0.13**	mg/L	0.040	0.0049	1	10/01/19 12:00	10/03/19 20:21	7440-42-8	
Cadmium	**0.00017J**	mg/L	0.0025	0.00011	1	10/01/19 12:00	10/03/19 20:21	7440-43-9	
Calcium	**11.7**	mg/L	5.0	0.55	50	10/01/19 12:00	10/03/19 20:27	7440-70-2	
Cobalt	**0.00048J**	mg/L	0.0050	0.00030	1	10/01/19 12:00	10/03/19 20:21	7440-48-4	
Lead	**0.00023J**	mg/L	0.0050	0.000046	1	10/01/19 12:00	10/03/19 20:21	7439-92-1	
Lithium	**0.0041J**	mg/L	0.030	0.00078	1	10/01/19 12:00	10/03/19 20:21	7439-93-2	
Selenium	**0.0019J**	mg/L	0.010	0.0013	1	10/01/19 12:00	10/03/19 20:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/01/19 12:00	10/03/19 20:21	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**198**	mg/L	10.0	10.0	1		10/03/19 16:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**7.1**	mg/L	1.0	0.024	1		10/02/19 09:47	16887-00-6	
Fluoride	**0.094J**	mg/L	0.30	0.029	1		10/02/19 09:47	16984-48-8	
Sulfate	**84.8**	mg/L	10.0	0.17	10		10/02/19 20:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Sample: EB-2-9-26-19 **Lab ID: 2623702004** Collected: 09/26/19 15:52 Received: 09/27/19 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/01/19 12:00	10/03/19 20:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/01/19 12:00	10/03/19 20:33	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	10/01/19 12:00	10/03/19 20:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/01/19 12:00	10/03/19 20:33	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	10/01/19 12:00	10/03/19 20:33	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/01/19 12:00	10/03/19 20:33	7440-43-9	
Calcium	**0.011J**	mg/L	0.10	0.011	1	10/01/19 12:00	10/03/19 20:33	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/01/19 12:00	10/03/19 20:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/01/19 12:00	10/03/19 20:33	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/01/19 12:00	10/03/19 20:33	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	10/01/19 12:00	10/03/19 20:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/01/19 12:00	10/03/19 20:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**11.0**	mg/L	10.0	10.0	1		10/03/19 16:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.074J**	mg/L	1.0	0.024	1		10/02/19 10:09	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/02/19 10:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/02/19 10:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Sample: FB-2-9-26 **Lab ID: 2623702005** Collected: 09/26/19 13:00 Received: 09/27/19 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/01/19 12:00	10/03/19 20:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/01/19 12:00	10/03/19 20:39	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	10/01/19 12:00	10/03/19 20:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/01/19 12:00	10/03/19 20:39	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	10/01/19 12:00	10/03/19 20:39	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/01/19 12:00	10/03/19 20:39	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	10/01/19 12:00	10/03/19 20:39	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/01/19 12:00	10/03/19 20:39	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/01/19 12:00	10/03/19 20:39	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/01/19 12:00	10/03/19 20:39	7439-93-2	
Selenium	ND	mg/L	0.010	0.0013	1	10/01/19 12:00	10/03/19 20:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/01/19 12:00	10/03/19 20:39	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**14.0**	mg/L	10.0	10.0	1		10/03/19 16:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**0.060J**	mg/L	1.0	0.024	1		10/02/19 10:30	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/02/19 10:30	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/02/19 10:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Sample: YGWC-49 **Lab ID: 2623702006** Collected: 09/26/19 16:45 Received: 09/27/19 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	ND	mg/L	0.0030	0.00027	1	10/01/19 12:00	10/03/19 20:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00035	1	10/01/19 12:00	10/03/19 20:44	7440-38-2	
Barium	**0.065**	mg/L	0.010	0.00049	1	10/01/19 12:00	10/03/19 20:44	7440-39-3	
Beryllium	**0.00013J**	mg/L	0.0030	0.000074	1	10/01/19 12:00	10/03/19 20:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	10/01/19 12:00	10/03/19 20:44	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/01/19 12:00	10/03/19 20:44	7440-43-9	
Calcium	**12.1**	mg/L	5.0	0.55	50	10/01/19 12:00	10/03/19 20:50	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/01/19 12:00	10/03/19 20:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/01/19 12:00	10/03/19 20:44	7439-92-1	
Lithium	**0.0036J**	mg/L	0.030	0.00078	1	10/01/19 12:00	10/03/19 20:44	7439-93-2	
Selenium	**0.0077J**	mg/L	0.010	0.0013	1	10/01/19 12:00	10/03/19 20:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000052	1	10/01/19 12:00	10/03/19 20:44	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**192**	mg/L	10.0	10.0	1		10/03/19 16:28		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.0**	mg/L	1.0	0.024	1		10/02/19 10:52	16887-00-6	
Fluoride	**0.090J**	mg/L	0.30	0.029	1		10/02/19 10:52	16984-48-8	
Sulfate	**80.0**	mg/L	10.0	0.17	10		10/02/19 21:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

QC Batch: 36236 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2623702001, 2623702002, 2623702003, 2623702004, 2623702005, 2623702006

METHOD BLANK: 163651 Matrix: Water
Associated Lab Samples: 2623702001, 2623702002, 2623702003, 2623702004, 2623702005, 2623702006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	10/03/19 19:06	
Arsenic	mg/L	ND	0.0050	0.00035	10/03/19 19:06	
Barium	mg/L	ND	0.010	0.00049	10/03/19 19:06	
Beryllium	mg/L	ND	0.0030	0.000074	10/03/19 19:06	
Boron	mg/L	ND	0.040	0.0049	10/03/19 19:06	
Cadmium	mg/L	ND	0.0025	0.00011	10/03/19 19:06	
Calcium	mg/L	ND	0.10	0.011	10/03/19 19:06	
Cobalt	mg/L	ND	0.0050	0.00030	10/03/19 19:06	
Lead	mg/L	ND	0.0050	0.000046	10/03/19 19:06	
Lithium	mg/L	ND	0.030	0.00078	10/03/19 19:06	
Selenium	mg/L	ND	0.010	0.0013	10/03/19 19:06	
Thallium	mg/L	ND	0.0010	0.000052	10/03/19 19:06	

LABORATORY CONTROL SAMPLE: 163652

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.10	103	80-120	
Barium	mg/L	0.1	0.11	107	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.11	105	80-120	
Calcium	mg/L	1	1.0	102	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.10	104	80-120	
Thallium	mg/L	0.1	0.10	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163653 163654

Parameter	Units	2623702001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	0.00029J	0.1	0.1	0.11	0.11	105	106	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	103	105	75-125	2	20	
Barium	mg/L	0.018	0.1	0.1	0.13	0.13	107	108	75-125	1	20	
Beryllium	mg/L	0.000077J	0.1	0.1	0.11	0.10	108	102	75-125	6	20	
Boron	mg/L	0.58	1	1	1.6	1.6	106	100	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163653 163654

Parameter	Units	2623702001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	ND	0.1	0.1	0.10	0.11	104	107	75-125	3	20	
Calcium	mg/L	3.7	1	1	4.9	5.0	118	130	75-125	2	20	M1
Cobalt	mg/L	ND	0.1	0.1	0.10	0.11	104	107	75-125	3	20	
Lead	mg/L	0.00013J	0.1	0.1	0.10	0.10	103	103	75-125	0	20	
Lithium	mg/L	0.0017J	0.1	0.1	0.11	0.10	108	103	75-125	4	20	
Selenium	mg/L	0.018	0.1	0.1	0.12	0.12	100	103	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	104	104	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

QC Batch: 36437 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2623702002, 2623702003, 2623702004, 2623702005, 2623702006

LABORATORY CONTROL SAMPLE: 164569

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 164570

Parameter	Units	2623700006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	225	219	3	10	

SAMPLE DUPLICATE: 164571

Parameter	Units	2623710002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1450	1330	9	10	

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REPORT OF LABORATORY ANALYSIS

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Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

QC Batch: 36464
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2623702001

LABORATORY CONTROL SAMPLE: 164734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	408	102	84-108	

SAMPLE DUPLICATE: 164735

Parameter	Units	2623714002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	13.0	ND		10	

SAMPLE DUPLICATE: 164763

Parameter	Units	2623696005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	275	262	5	10	

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REPORT OF LABORATORY ANALYSIS

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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

QC Batch: 36286 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2623702001, 2623702002, 2623702003, 2623702004, 2623702005, 2623702006

METHOD BLANK: 163856 Matrix: Water
Associated Lab Samples: 2623702001, 2623702002, 2623702003, 2623702004, 2623702005, 2623702006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.031J	1.0	0.024	10/02/19 07:36	
Fluoride	mg/L	ND	0.30	0.029	10/02/19 07:36	
Sulfate	mg/L	0.053J	1.0	0.017	10/02/19 07:36	

LABORATORY CONTROL SAMPLE: 163857

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.7	107	90-110	
Fluoride	mg/L	10	10.9	109	90-110	
Sulfate	mg/L	10	10.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163858 163859

Parameter	Units	2623702001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.7	10	10	11.0	11.7	93	100	90-110	6	15	
Fluoride	mg/L	0.12J	10	10	9.5	10.3	94	102	90-110	8	15	
Sulfate	mg/L	30.3	10	10	36.7	37.2	64	69	90-110	1	15	M1

MATRIX SPIKE SAMPLE: 163860

Parameter	Units	2623702002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	6.5	10	16.5	100	90-110	
Fluoride	mg/L	0.098J	10	10.7	106	90-110	
Sulfate	mg/L	0.23J	10	10.7	104	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623702

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2623702001	**YGWC-23S**	EPA 3005A	36236	EPA 6020B	36255
2623702002	**YGWC-24S**	EPA 3005A	36236	EPA 6020B	36255
2623702003	**YGWC-36**	EPA 3005A	36236	EPA 6020B	36255
2623702004	**EB-2-9-26-19**	EPA 3005A	36236	EPA 6020B	36255
2623702005	**FB-2-9-26**	EPA 3005A	36236	EPA 6020B	36255
2623702006	**YGWC-49**	EPA 3005A	36236	EPA 6020B	36255
2623702001	**YGWC-23S**	SM 2540C	36464		
2623702002	**YGWC-24S**	SM 2540C	36437		
2623702003	**YGWC-36**	SM 2540C	36437		
2623702004	**EB-2-9-26-19**	SM 2540C	36437		
2623702005	**FB-2-9-26**	SM 2540C	36437		
2623702006	**YGWC-49**	SM 2540C	36437		
2623702001	**YGWC-23S**	EPA 300.0	36286		
2623702002	**YGWC-24S**	EPA 300.0	36286		
2623702003	**YGWC-36**	EPA 300.0	36286		
2623702004	**EB-2-9-26-19**	EPA 300.0	36286		
2623702005	**FB-2-9-26**	EPA 300.0	36286		
2623702006	**YGWC-49**	EPA 300.0	36286		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-508-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470) Boron, Calcium	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)	LAB ID NUMBER
CONTAINER TYPE:							P	P		P	
PRESERVATION:							3	7		3	
9-27-19	0915	GW		X	YGWC-23S	4	✓	✓	✓	✓	
9-26-19	1450	GW		X	YGWC-24S	6	✓	✓	✓	✓	
9-26-19	1315	GW		X	YGWC-36	4	✓	✓	✓	✓	
9-26-19	1552	GW		X	EB-2-9-26-19	4	✓	✓	✓	✓	
9-26-19	1300	GW		X	FB-2-9-26	4	✓	✓	✓	✓	
9-26-19	1645	GW		X	YGWC-49	4	✓	✓	✓	✓	

CONTAINER TYPE: P - PLASTIC; A - AMBER GLASS; G - CLEAR GLASS; V - VOA VIAL; S - STERILE; O - OTHER

PRESERVATION: 1 - HCl, ≤6°C; 2 - H_2SO_4, ≤6°C; 3 - HNO_3; 4 - NaOH, ≤6°C; 5 - NaOH/ZnAc, ≤6°C; 6 - $Na_2S_2O_3$, ≤6°C; 7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER; WW - WASTEWATER; GW - GROUNDWATER; SW - SURFACE WATER; ST - STORM WATER; W - WATER; S - SOIL; SL - SLUDGE; SD - SOLID; A - AIR; L - LIQUID; P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO#: 2623702

2623702

SAMPLED BY AND TITLE: [illegible] ACC | DATE/TIME: See above | RELINQUISHED BY: [signature] | DATE/TIME: 9-27-19 1535

RECEIVED BY: | DATE/TIME: | RELINQUISHED BY: | DATE/TIME:

RECEIVED BY/LAB: [signature] | DATE/TIME: 09/27/19 1535

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 1.0 Max: | SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS | Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project # ____

WO# : 2623702

PM: BM Due Date: 10/04/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #: ____

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other ____

Thermometer Used: 83 Type of Ice: Wet (checked) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 1.0 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/27/19 mk

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased): ____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: ____ Date/Time: ____

Comments/ Resolution: ____

Project Manager Review: ____ **Date:** ____

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

F-ALLC003rev.3, 11September2006

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

October 25, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2623703001	**YGWC-23S**	Water	09/27/19 09:15	09/27/19 15:35
2623703002	**YGWC-24S**	Water	09/26/19 14:50	09/27/19 15:35
2623703003	**YGWC-36**	Water	09/26/19 13:15	09/27/19 15:35
2623703004	**EB-2-9-26-19**	Water	09/26/19 15:52	09/27/19 15:35
2623703005	**FB-2-9-26-19**	Water	09/26/19 13:00	09/27/19 15:35
2623703006	**YGWC-49**	Water	09/26/19 16:45	09/27/19 15:35

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110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2623703001	**YGWC-23S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623703002	**YGWC-24S**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623703003	**YGWC-36**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623703004	**EB-2-9-26-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623703005	**FB-2-9-26-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2623703006	**YGWC-49**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Sample: YGWC-23S **Lab ID: 2623703001** Collected: 09/27/19 09:15 Received: 09/27/19 15:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.569 ± 0.334 (0.525) C:89% T:NA**	pCi/L	10/15/19 08:49	13982-63-3	
Radium-228	EPA 9320	**0.115 ± 0.400 (0.902) C:79% T:74%**	pCi/L	10/18/19 11:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.684 ± 0.734 (1.43)**	pCi/L	10/21/19 11:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Sample: YGWC-24S **Lab ID: 2623703002** Collected: 09/26/19 14:50 Received: 09/27/19 15:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.813 ± 0.365 (0.441) C:95% T:NA**	pCi/L	10/15/19 08:49	13982-63-3	
Radium-228	EPA 9320	**0.151 ± 0.356 (0.793) C:80% T:75%**	pCi/L	10/18/19 11:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.964 ± 0.721 (1.23)**	pCi/L	10/21/19 11:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Sample: YGWC-36 **Lab ID: 2623703003** Collected: 09/26/19 13:15 Received: 09/27/19 15:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.430 ± 0.277 (0.414) C:87% T:NA**	pCi/L	10/15/19 08:49	13982-63-3	
Radium-228	EPA 9320	**0.549 ± 0.452 (0.906) C:79% T:68%**	pCi/L	10/18/19 11:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.979 ± 0.729 (1.32)**	pCi/L	10/21/19 11:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Sample: EB-2-9-26-19 **Lab ID: 2623703004** Collected: 09/26/19 15:52 Received: 09/27/19 15:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.742 ± 0.338 (0.362) C:91% T:NA**	pCi/L	10/15/19 08:49	13982-63-3	
Radium-228	EPA 9320	**0.0618 ± 0.388 (0.883) C:80% T:80%**	pCi/L	10/18/19 11:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.804 ± 0.726 (1.25)**	pCi/L	10/21/19 11:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Sample: FB-2-9-26-19 **Lab ID: 2623703005** Collected: 09/26/19 13:00 Received: 09/27/19 15:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.385 ± 0.246 (0.359) C:98% T:NA**	pCi/L	10/15/19 08:49	13982-63-3	
Radium-228	EPA 9320	**0.284 ± 0.366 (0.779) C:81% T:80%**	pCi/L	10/18/19 11:07	15262-20-1	
Total Radium	Total Radium Calculation	**0.669 ± 0.612 (1.14)**	pCi/L	10/21/19 11:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Sample: YGWC-49 **Lab ID: 2623703006** Collected: 09/26/19 16:45 Received: 09/27/19 15:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.614 ± 0.323 (0.444) C:91% T:NA**	pCi/L	10/15/19 08:49	13982-63-3	
Radium-228	EPA 9320	**0.543 ± 0.393 (0.766) C:79% T:81%**	pCi/L	10/18/19 11:07	15262-20-1	
Total Radium	Total Radium Calculation	**1.16 ± 0.716 (1.21)**	pCi/L	10/21/19 11:40	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

QC Batch: 365380 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2623703001, 2623703002, 2623703003, 2623703004, 2623703005, 2623703006

METHOD BLANK: 1772185 Matrix: Water
Associated Lab Samples: 2623703001, 2623703002, 2623703003, 2623703004, 2623703005, 2623703006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.766 ± 0.438 (0.794) C:80% T:71%	pCi/L	10/18/19 11:08	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

QC Batch: 365376 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2623703001, 2623703002, 2623703003, 2623703004, 2623703005, 2623703006

METHOD BLANK: 1772181 Matrix: Water
Associated Lab Samples: 2623703001, 2623703002, 2623703003, 2623703004, 2623703005, 2623703006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.470 ± 0.253 (0.295) C:98% T:NA	pCi/L	10/15/19 08:49	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond 3
Pace Project No.: 2623703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2623703001	**YGWC-23S**	EPA 9315	365376		
2623703002	**YGWC-24S**	EPA 9315	365376		
2623703003	**YGWC-36**	EPA 9315	365376		
2623703004	**EB-2-9-26-19**	EPA 9315	365376		
2623703005	**FB-2-9-26-19**	EPA 9315	365376		
2623703006	**YGWC-49**	EPA 9315	365376		
2623703001	**YGWC-23S**	EPA 9320	365380		
2623703002	**YGWC-24S**	EPA 9320	365380		
2623703003	**YGWC-36**	EPA 9320	365380		
2623703004	**EB-2-9-26-19**	EPA 9320	365380		
2623703005	**FB-2-9-26-19**	EPA 9320	365380		
2623703006	**YGWC-49**	EPA 9320	365380		
2623703001	**YGWC-23S**	Total Radium Calculation	367107		
2623703002	**YGWC-24S**	Total Radium Calculation	367107		
2623703003	**YGWC-36**	Total Radium Calculation	367107		
2623703004	**EB-2-9-26-19**	Total Radium Calculation	367107		
2623703005	**FB-2-9-26-19**	Total Radium Calculation	367107		
2623703006	**YGWC-49**	Total Radium Calculation	367107		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham | CC:

REQUESTED COMPLETION DATE: | PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III (EPA 6020/7470A) Boron, Calcium	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C)	Detected App IV (See List below)	Det. App. IV Radium 226 & 228 (SW-846 9315/9320)
					CONTAINER TYPE:		P	P		P
					PRESERVATION:		3	7		3
9-27-19	0915	GW		X	YGWC-23S	4	✓	✓	✓	✓
9-26-19	1450	GW		X	YGWC-24S	6	✓	✓	✓	✓
9-26-19	1315	GW		X	YGWC-36	4	✓	✓	✓	✓
9-26-19	1552	GW		X	FB-2-9-26-19	4	✓	✓	✓	✓
9-26-19	1300	GW		X	FB-2-9-26	4	✓	✓	✓	✓
9-26-19	1645	GW		X	YGWC-49	4	✓	✓	✓	✓

LAB ID NUMBER

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW -	DRINKING WATER	S -	SOIL
WW -	WASTEWATER	SL -	SLUDGE
GW -	GROUNDWATER	SD -	SOLID
SW -	SURFACE WATER	A -	AIR
ST -	STORM WATER	L -	LIQUID
W -	WATER	P -	PRODUCT

REMARKS/ADDITIONAL INFORMATION

APP III plus detected APP IV

WO#: 2623703

PM: BM Due Date: 10/25/19

CLIENT: GAPower-CCR

SAMPLED BY AND TITLE: [signature] (A) ACC | DATE/TIME: See above

RECEIVED BY: | DATE/TIME:

RELINQUISHED BY: [signature] | DATE/TIME: 9-27-19 1535

RELINQUISHED BY: | DATE/TIME:

RECEIVED BY/LAB: [signature] | DATE/TIME: 09/27/19 1535

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER | CLIENT OTHER FS

Custody Seal: Intact Broken Not Present | # of Coolers | Cooler ID:

pH checked: Yes No NA | Ice: Yes No NA | Temperature: Min: 1.0 Max:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

APP III, plus Detected APP IV

Detected APP IV: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, **Fluoride**, Lead, Lithium, Selenium, Thallium, **Radium**

Bolded Detections: Listed above or included with App III

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2623703

2623703

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.0 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/27/19 MK

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 13, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates AP Additional
Pace Project No.: 2625471

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates AP Additional
Pace Project No.: 2625471

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: Plant Yates AP Additional
Pace Project No.: 2625471

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2625471001	**YAMW-1**	Water	09/26/19 10:05	09/26/19 15:15
2625471002	**PZ-35**	Water	09/26/19 11:00	09/26/19 15:15

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SAMPLE ANALYTE COUNT

Project: Plant Yates AP Additional
Pace Project No.: 2625471

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2625471001	**YAMW-1**	EPA 6020B	JOR	12	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
2625471002	**PZ-35**	EPA 6020B	JOR	12	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

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ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2625471

Sample: YAMW-1 **Lab ID: 2625471001** Collected: 09/26/19 10:05 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A								
Antimony	ND	mg/L	0.0050	0.00011	1	11/18/19 15:22	11/19/19 13:06	7440-36-0	
Arsenic	ND	mg/L	0.0025	0.000060	1	11/18/19 15:22	11/19/19 13:06	7440-38-2	
Barium	**0.047**	mg/L	0.0050	0.000060	1	11/18/19 15:22	11/19/19 13:06	7440-39-3	
Beryllium	ND	mg/L	0.0010	0.000050	1	11/18/19 15:22	11/19/19 13:06	7440-41-7	
Boron	**0.092**	mg/L	0.040	0.0026	1	11/18/19 15:22	11/19/19 13:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.000070	1	11/18/19 15:22	11/19/19 13:06	7440-43-9	
Calcium	**9.3**	mg/L	0.20	0.021	1	11/18/19 15:22	11/19/19 13:06	7440-70-2	M6
Cobalt	**0.015**	mg/L	0.0050	0.000050	1	11/18/19 15:22	11/19/19 13:06	7440-48-4	
Lead	ND	mg/L	0.0015	0.000050	1	11/18/19 15:22	11/19/19 13:06	7439-92-1	BC
Lithium	ND	mg/L	0.030	0.00042	1	11/18/19 15:22	11/19/19 13:06	7439-93-2	
Selenium	ND	mg/L	0.0025	0.000080	1	11/18/19 15:22	11/19/19 13:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000060	1	11/18/19 15:22	11/19/19 13:06	7440-28-0	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**6.4**	mg/L	1.0	0.60	1		10/01/19 20:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/19 20:43	16984-48-8	
Sulfate	**46.6**	mg/L	1.0	0.50	1		10/01/19 20:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2625471

Sample: PZ-35 **Lab ID: 2625471002** Collected: 09/26/19 11:00 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A								
Antimony	ND	mg/L	0.0050	0.00011	1	11/18/19 15:22	11/19/19 13:40	7440-36-0	
Arsenic	ND	mg/L	0.0025	0.000060	1	11/18/19 15:22	11/19/19 13:40	7440-38-2	
Barium	**0.039**	mg/L	0.0050	0.000060	1	11/18/19 15:22	11/19/19 13:40	7440-39-3	
Beryllium	ND	mg/L	0.0010	0.000050	1	11/18/19 15:22	11/19/19 13:40	7440-41-7	
Boron	ND	mg/L	0.040	0.0026	1	11/18/19 15:22	11/19/19 13:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.000070	1	11/18/19 15:22	11/19/19 13:40	7440-43-9	
Calcium	**4.7**	mg/L	0.20	0.021	1	11/18/19 15:22	11/19/19 13:40	7440-70-2	
Cobalt	ND	mg/L	0.0050	0.000050	1	11/18/19 15:22	11/19/19 13:40	7440-48-4	
Lead	ND	mg/L	0.0015	0.000050	1	11/18/19 15:22	11/19/19 13:40	7439-92-1	BC
Lithium	ND	mg/L	0.030	0.00042	1	11/18/19 15:22	11/19/19 13:40	7439-93-2	
Selenium	ND	mg/L	0.0025	0.000080	1	11/18/19 15:22	11/19/19 13:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000060	1	11/18/19 15:22	11/19/19 13:40	7440-28-0	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.5**	mg/L	1.0	0.60	1		10/01/19 20:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/19 20:58	16984-48-8	
Sulfate	**14.3**	mg/L	1.0	0.50	1		10/01/19 20:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2625471

QC Batch: 510188 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Associated Lab Samples: 2625471001, 2625471002

METHOD BLANK: 2737644 Matrix: Water
Associated Lab Samples: 2625471001, 2625471002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0050	0.00011	11/19/19 12:13	
Arsenic	mg/L	ND	0.0025	0.000060	11/19/19 12:13	
Barium	mg/L	ND	0.0050	0.000060	11/19/19 12:13	
Beryllium	mg/L	ND	0.0010	0.000050	11/19/19 12:13	
Boron	mg/L	ND	0.040	0.0026	11/19/19 12:13	
Cadmium	mg/L	ND	0.00050	0.000070	11/19/19 12:13	
Calcium	mg/L	ND	0.20	0.021	11/19/19 12:13	
Cobalt	mg/L	ND	0.0050	0.000050	11/19/19 12:13	
Lead	mg/L	ND	0.0015	0.000050	11/19/19 16:48	BC
Lithium	mg/L	ND	0.030	0.00042	11/19/19 12:13	
Selenium	mg/L	ND	0.0025	0.000080	11/19/19 12:13	
Thallium	mg/L	ND	0.0010	0.000060	11/19/19 12:13	

LABORATORY CONTROL SAMPLE: 2737645

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.05	0.053	106	80-120	
Arsenic	mg/L	0.01	0.0097	97	80-120	
Barium	mg/L	0.05	0.049	97	80-120	
Beryllium	mg/L	0.01	0.010	100	80-120	
Boron	mg/L	0.05	0.051	102	80-120	
Cadmium	mg/L	0.01	0.010	101	80-120	
Calcium	mg/L	0.62	0.64	102	80-120	
Cobalt	mg/L	0.01	0.010	101	80-120	
Lead	mg/L	0.05	0.051	102	80-120	BC
Lithium	mg/L	0.05	0.051	102	80-120	
Selenium	mg/L	0.05	0.049	97	80-120	
Thallium	mg/L	0.01	0.010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2737646 2737647

Parameter	Units	2625471001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.05	0.05	0.052	0.053	103	107	75-125	3	20	
Arsenic	mg/L	ND	0.01	0.01	0.010	0.010	100	104	75-125	3	20	
Barium	mg/L	0.047	0.05	0.05	0.097	0.099	101	104	75-125	2	20	
Beryllium	mg/L	ND	0.01	0.01	0.0098	0.010	97	100	75-125	2	20	
Boron	mg/L	0.092	0.05	0.05	0.15	0.15	113	124	75-125	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2625471

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2737646 2737647

Parameter	Units	2625471001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	mg/L	ND	0.01	0.01	0.0099	0.010	97	101	75-125	3	20	
Calcium	mg/L	9.3	0.62	0.62	9.9	10.8	96	242	75-125	9	20	M6
Cobalt	mg/L	0.015	0.01	0.01	0.025	0.025	101	104	75-125	1	20	
Lead	mg/L	ND	0.05	0.05	0.051	0.052	101	104	75-125	2	20	
Lithium	mg/L	ND	0.05	0.05	0.063	0.065	96	100	75-125	3	20	
Selenium	mg/L	ND	0.05	0.05	0.049	0.050	97	99	75-125	2	20	
Thallium	mg/L	ND	0.01	0.01	0.010	0.010	102	104	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2625471

QC Batch: 500864
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2625471001, 2625471002

METHOD BLANK: 2694310 Matrix: Water
Associated Lab Samples: 2625471001, 2625471002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/19 17:49	
Fluoride	mg/L	ND	0.10	0.050	10/01/19 17:49	
Sulfate	mg/L	ND	1.0	0.50	10/01/19 17:49	

LABORATORY CONTROL SAMPLE: 2694311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694312 2694313

Parameter	Units	2623620013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	17.1	50	50	74.9	69.9	115	105	90-110	7	10	M1
Fluoride	mg/L	0.064J	2.5	2.5	2.9	2.7	115	104	90-110	10	10	M1
Sulfate	mg/L	80.1	50	50	123	123	85	86	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694314 2694315

Parameter	Units	92447530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	22.7	50	50	76.0	75.5	107	106	90-110	1	10	
Fluoride	mg/L	0.073J	2.5	2.5	2.7	2.7	107	106	90-110	1	10	
Sulfate	mg/L	10.1	50	50	64.0	63.6	108	107	90-110	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Yates AP Additional
Pace Project No.: 2625471

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville

ANALYTE QUALIFIERS

BC	The same analyte was detected in an associated blank at a concentration above 1/2 the reporting limit but below the laboratory reporting limit.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates AP Additional
Pace Project No.: 2625471

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2625471001	**YAMW-1**	EPA 3010A	510188	EPA 6020B	510210
2625471002	**PZ-35**	EPA 3010A	510188	EPA 6020B	510210
2625471001	**YAMW-1**	EPA 300.0 Rev 2.1 1993	500864		
2625471002	**PZ-35**	EPA 300.0 Rev 2.1 1993	500864		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC: Evan Perry/ACC

REQUESTED COMPLETION DATE: 7 days

PO #: SCS10382775

PROJECT NAME/STATE: ~~Plant Yates Pond 1~~ EBP AP-3-A-B-B'

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		Metals* (EPA620)	Cl, F, SO_4 (EPA 300.0)							LAB ID NUMBER
CONTAINER TYPE:								P	P							
PRESERVATION:								3	7							
201-09-26	1005	W		x	YAMW-1	7		x	x							
201-09-26	1100	W		x	PZ-35	7		x	x							

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

Reanalyze / Report from WO: 2623614

SAMPLED BY AND TITLE: Chris Parker

DATE/TIME: 9/26/2019

RELINQUISHED BY: Evan Perry/ACC

DATE/TIME: 2019-11-11 01325

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

DATE/TIME:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

RECEIVED BY LAB:

DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min: Max:

Custody Seal: Intact Broken Not Present

# of Coolers

Cooler ID:

* Antimony, arsenic, boron, barium, beryllium, calcium, cadmium, cobalt, lead, lithium, selenium, thallium

Product Name: Low-Flow System

Date: 2019-09-25 13:11:35

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWA-4I	Final Pumping Rate	110 mL/min
Well diameter	2 in	Total System Volume	0.9676365 L
Well Total Depth	49.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12 in
Depth to Water	24.62 ft	Total Volume Pumped	5 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:47:33	900.01	19.87	6.19	149.48	3.08	25.40	1.76	167.38
Last 5	12:52:33	1200.00	19.53	6.20	150.17	2.75	25.50	1.70	162.84
Last 5	12:57:33	1499.99	19.77	6.19	150.03	2.91	25.60	1.61	157.10
Last 5	13:02:33	1799.98	19.95	6.20	149.73	2.22	25.60	1.54	150.60
Last 5	13:07:33	2099.98	19.90	6.20	149.96	1.97	25.60	1.48	144.31
Variance 0			0.24	-0.01	-0.13			-0.09	-5.74
Variance 1			0.18	0.01	-0.30			-0.07	-6.50
Variance 2			-0.04	0.00	0.23			-0.06	-6.29

Notes

Sampled at 1315. Sunny 80s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-24 13:28:26

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	111 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	106 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5D	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	1.556453 L
Well Total Depth	131.6 ft	Calculated Sample Rate	300 sec
Screen Length	50 ft	Stabilization Drawdown	5 in
Depth to Water	24.3 ft	Total Volume Pumped	3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:00:08	600.01	19.48	6.95	225.42	2.90	24.70	0.11	-39.85
Last 5	13:05:08	900.02	19.30	6.92	215.59	2.59	24.70	0.10	-47.68
Last 5	13:10:08	1200.01	19.57	6.94	213.25	1.30	24.70	0.09	-55.31
Last 5	13:15:09	1501.01	19.41	6.93	209.68	1.49	24.70	0.08	-57.87
Last 5	13:20:09	1801.10	19.21	6.93	208.14	1.06	24.70	0.09	-58.02
Variance 0			0.27	0.02	-2.35			-0.01	-7.63
Variance 1			-0.16	-0.01	-3.57			-0.00	-2.55
Variance 2			-0.20	-0.00	-1.55			0.00	-0.15

Notes

Sampled @ 1325. Sunny, 80s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-24 15:03:39

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	58.5 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	5 in
Depth to Water	21.1 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:35:15	600.02	18.50	5.74	84.88	2.41	21.60	5.75	62.85
Last 5	14:40:15	900.02	18.50	5.65	84.95	3.30	21.50	5.76	68.08
Last 5	14:45:16	1201.02	18.37	5.63	84.84	3.53	21.50	5.78	70.16
Last 5	14:50:17	1502.01	18.32	5.59	84.91	3.98	21.50	5.76	74.96
Last 5	14:55:17	1802.01	18.32	5.60	84.63	4.77	21.60	5.76	77.33
Variance 0			-0.14	-0.02	-0.11			0.01	2.07
Variance 1			-0.04	-0.03	0.07			-0.02	4.80
Variance 2			0.00	0.01	-0.28			0.01	2.37

Notes

Sampled @ 1500. Sunny,90s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-25 14:32:17

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	YGWA-17S	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	4 in
Depth to Water	15.58 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:09:45	600.01	21.02	5.50	74.54	3.60	15.90	1.55	184.26
Last 5	14:14:45	900.01	20.84	5.49	76.27	3.69	15.90	1.19	181.46
Last 5	14:19:45	1200.00	20.95	5.50	77.93	3.24	15.90	1.07	181.43
Last 5	14:24:45	1499.99	20.97	5.49	78.85	3.85	15.90	1.03	183.09
Last 5	14:29:46	1800.98	21.02	5.49	79.24	3.52	15.90	1.01	187.61
Variance 0			0.11	0.01	1.65			-0.11	-0.03
Variance 1			0.02	-0.00	0.92			-0.04	1.67
Variance 2			0.05	0.00	0.39			-0.02	4.52

Notes

Sampled at 14:35. Sunny 90s. DUP 1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 12:29:44

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	79.67 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	25.57 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:07:35	600.01	21.91	6.25	109.47	13.00	25.80	1.96	108.59
Last 5	12:12:35	900.01	19.56	6.04	108.69	8.76	25.80	3.10	124.34
Last 5	12:17:35	1200.00	19.12	6.04	109.17	6.03	25.80	3.23	123.56
Last 5	12:22:35	1499.99	19.06	6.03	108.92	4.54	25.80	3.21	123.15
Last 5	12:27:35	1799.98	18.84	6.04	108.94	3.75	25.80	3.20	120.95
Variance 0			-0.44	0.01	0.49			0.13	-0.78
Variance 1			-0.06	-0.01	-0.25			-0.01	-0.41
Variance 2			-0.22	0.01	0.02			-0.01	-2.20

Notes

Sampled at 12:30. Sunny 80s. DUP 2 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 10:43:23

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.86 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14 in
Depth to Water	22.65 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:20:55	900.00	18.35	5.20	60.97	7.65	23.70	1.38	147.93
Last 5	10:25:55	1199.99	18.39	5.20	60.89	6.91	23.80	1.25	147.97
Last 5	10:30:55	1499.99	18.41	5.20	60.75	5.69	23.80	1.22	146.19
Last 5	10:35:55	1799.98	18.35	5.20	60.63	5.20	23.80	1.21	145.95
Last 5	10:40:55	2099.97	18.46	5.20	60.57	4.87	23.80	1.21	145.76
Variance 0			0.02	0.00	-0.14			-0.03	-1.79
Variance 1			-0.06	-0.00	-0.12			-0.02	-0.24
Variance 2			0.12	0.00	-0.06			0.00	-0.19

Notes

Sampled at 10:45. Sunny 80s. FB 1 here at 10:30 - gloves

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-25 11:49:11

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	24 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	19 ft

Well Information:		Pumping Information:	
Well ID	YGWA-20S	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.5921222 L
Well Total Depth	23.79 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	6 in
Depth to Water	12.93 ft	Total Volume Pumped	18 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:24:58	6600.86	18.93	5.86	56.09	6.42	13.40	6.60	135.65
Last 5	11:29:58	6900.86	19.20	5.86	56.19	5.75	13.40	6.56	144.25
Last 5	11:34:58	7200.85	19.38	5.86	56.16	5.13	13.40	6.54	164.77
Last 5	11:39:58	7500.84	19.03	5.86	56.16	5.19	13.40	6.56	203.19
Last 5	11:44:58	7800.83	19.15	5.86	56.34	4.77	13.40	6.55	249.51
Variance 0			0.17	0.00	-0.03			-0.02	20.51
Variance 1			-0.35	-0.01	0.00			0.02	38.42
Variance 2			0.12	0.00	0.17			-0.01	46.32

Notes

Sampled at 11:50. Sunny 80s. FB-1 here at 9:45

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-24 13:24:17

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-21I	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.07 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:01:29	1499.99	21.91	6.90	220.69	1.58	--	0.35	-70.03
Last 5	13:06:30	1800.98	22.72	6.89	208.53	1.96	--	0.32	-66.82
Last 5	13:11:31	2102.03	23.12	6.88	200.80	2.12	--	0.31	-59.65
Last 5	13:16:31	2401.97	23.03	6.88	198.21	1.36	--	0.31	-56.41
Last 5	13:21:31	2701.95	23.37	6.87	196.93	1.29	--	0.34	-59.87
Variance 0			0.41	-0.02	-7.73			-0.00	7.17
Variance 1			-0.09	0.00	-2.59			-0.00	3.24
Variance 2			0.34	-0.01	-1.27			0.03	-3.45

Notes

Sampled at 13:25. Sunny 90s. Transducer in well.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-27 09:15:49

Project Information:		Pump Information:	
Operator Name	Jordan Berisford	Pump Model/Type	QED Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates AP-3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	39 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	34 ft

Well Information:		Pumping Information:	
Well ID	YGWC-23S	Final Pumping Rate	220 mL/min
Well diameter	2 in	Total System Volume	0.8414565 L
Well Total Depth	39.18 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	08:55:02	300.08	18.86	5.76	102.28	1.89	--	8.57	94.81
Last 5	09:00:02	600.02	18.74	5.77	102.81	1.74	--	8.61	97.63
Last 5	09:05:02	900.02	18.73	5.77	102.08	1.55	--	8.60	100.34
Last 5	09:10:02	1200.02	18.87	5.77	101.85	1.99	--	8.60	102.99
Last 5	09:15:02	1500.01	19.03	5.77	100.87	2.01	--	8.60	105.45
Variance 0			-0.01	0.00	-0.74			-0.01	2.71
Variance 1			0.14	-0.00	-0.23			0.00	2.65
Variance 2			0.16	0.00	-0.98			-0.00	2.46

Notes

Sunny, Sample time 0915, unable to obtain WL, transducer in well

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 14:53:04

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-24S	Final Pumping Rate	210 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	57.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	29.59 ft	Total Volume Pumped	7.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:25:10	600.02	20.85	5.46	60.21	0.38	29.40	6.17	149.78
Last 5	14:30:10	900.02	20.56	5.50	60.22	0.14	29.50	6.18	146.52
Last 5	14:35:10	1200.02	21.17	5.50	60.55	0.16	29.60	6.14	145.58
Last 5	14:40:10	1500.01	21.78	5.47	59.63	0.85	29.60	6.13	146.27
Last 5	14:45:10	1800.01	20.81	5.52	60.05	0.36	29.60	6.13	142.75
Variance 0			0.62	0.00	0.34			-0.04	-0.94
Variance 1			0.61	-0.04	-0.92			-0.01	0.69
Variance 2			-0.98	0.06	0.42			0.00	-3.52

Notes

Sampled at 1450. Sunny, 90s. Extra RAD here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 10:56:32

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	42 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	37 ft

Well Information:		Pumping Information:	
Well ID	YGWA-33S	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8904147 L
Well Total Depth	38.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:25:13	600.03	20.96	3.71	1172.05	2.37	--	0.47	175.95
Last 5	10:30:13	900.02	21.17	3.72	1163.56	2.86	--	0.46	188.65
Last 5	10:35:13	1200.01	21.28	3.73	1161.76	2.19	--	0.44	199.23
Last 5	10:40:13	1500.00	21.31	3.74	1158.03	0.97	--	0.43	209.10
Last 5	10:45:13	1800.01	21.31	3.74	1161.06	1.27	--	0.41	219.12
Variance 0			0.11	0.01	-1.80			-0.03	10.58
Variance 1			0.02	0.01	-3.73			-0.00	9.87
Variance 2			0.01	0.00	3.03			-0.03	10.02

Notes

Sampled at 1050. Sunny, 80s. Transducer in well.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 13:17:54

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	63 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	58 ft

Well Information:		Pumping Information:	
Well ID	YGWC-36	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	1.093122 L
Well Total Depth	60.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	6.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:50:11	600.02	20.95	5.45	311.92	2.15	--	1.70	139.89
Last 5	12:55:11	900.02	21.18	5.45	288.88	1.87	--	1.33	140.39
Last 5	13:00:11	1200.01	21.09	5.52	259.52	2.39	--	0.86	137.78
Last 5	13:05:11	1500.01	20.90	5.51	254.19	1.90	--	0.78	138.42
Last 5	13:10:11	1800.01	20.82	5.51	255.61	1.76	--	0.78	138.29
Variance 0			-0.09	0.07	-29.35			-0.47	-2.61
Variance 1			-0.18	-0.01	-5.33			-0.09	0.65
Variance 2			-0.09	0.00	1.42			0.00	-0.13

Notes

Sampled at 1315. Sunny, 90s. FB-2-9-26 at 1300. Transducer in well.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 16:47:48

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	83 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	78 ft

Well Information:		Pumping Information:	
Well ID	YGWC-49	Final Pumping Rate	210 mL/min
Well diameter	2 in	Total System Volume	1.286177 L
Well Total Depth	79.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	11 in
Depth to Water	31.51 ft	Total Volume Pumped	7.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:20:19	600.02	27.79	5.74	247.77	1.88	32.10	2.35	99.00
Last 5	16:25:19	900.02	25.94	5.67	228.02	1.27	32.20	2.20	100.52
Last 5	16:30:19	1200.02	21.49	5.61	237.78	1.59	32.30	2.32	103.77
Last 5	16:35:19	1500.02	21.10	5.58	238.28	1.17	32.40	2.39	105.66
Last 5	16:40:19	1800.01	20.91	5.60	241.05	1.86	32.40	2.37	104.80
Variance 0			-4.45	-0.06	9.76			0.12	3.26
Variance 1			-0.39	-0.03	0.50			0.08	1.89
Variance 2			-0.19	0.03	2.77			-0.03	-0.86

Notes

Sampled at 1645. Sunny, 90s. EB-2-9-26 at 1552.

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates R6
Pace Project No.: 2624142

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 09, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This revised report replaces the report issued on 10/18/2019. The report has been revised to include Appendix IV Metals data which were omitted in the original report. No other changes have been made to this report.

This revised report replaces the revised report issued on 10/25/2019. The report has been revised to correct sample IDs per consultant request. No other changes have been made to this report.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates R6
Pace Project No.: 2624142

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates R6
Pace Project No.: 2624142

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624142001	**YGWA-39**	Water	10/09/19 10:45	10/09/19 17:00
2624142002	**YGWA-40**	Water	10/09/19 09:46	10/09/19 17:00
2624142003	**YGWC-38**	Water	10/09/19 11:16	10/09/19 17:00
2624142004	**YGWC-41**	Water	10/09/19 14:02	10/09/19 17:00
2624142005	**YGWC-42**	Water	10/09/19 13:55	10/09/19 17:00
2624142006	**YGWC-43**	Water	10/09/19 12:10	10/09/19 17:00
2624142007	**EB-1-10-9-19**	Water	10/09/19 13:00	10/09/19 17:00
2624142008	**DUP-1**	Water	10/09/19 00:00	10/09/19 17:00
2624142009	**FB-1-10-9-19**	Water	10/09/19 12:10	10/09/19 17:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates R6
Pace Project No.: 2624142

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2624142001	**YGWA-39**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142002	**YGWA-40**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142003	**YGWC-38**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142004	**YGWC-41**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142005	**YGWC-42**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142006	**YGWC-43**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142007	**EB-1-10-9-19**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142008	**DUP-1**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3
2624142009	**FB-1-10-9-19**	EPA 6020B	CSW	12
		SM 2540C	ALW	1
		EPA 300.0	MWB	3

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: YGWA-39 **Lab ID: 2624142001** Collected: 10/09/19 10:45 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	**0.00063J**	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 20:20	7440-38-2	
Barium	**0.013**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 20:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 20:20	7440-41-7	
Boron	**0.017J**	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 20:20	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 20:20	7440-43-9	
Calcium	**2.4**	mg/L	0.10	0.011	1	10/10/19 17:50	10/14/19 20:20	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 20:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 20:20	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 20:20	7439-92-1	
Lithium	**0.0036J**	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 20:20	7439-93-2	
Molybdenum	**0.0018J**	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 20:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 20:20	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**119**	mg/L	10.0	10.0	1		10/14/19 11:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.1**	mg/L	1.0	0.024	1		10/12/19 12:31	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/12/19 12:31	16984-48-8	
Sulfate	**15.0**	mg/L	1.0	0.017	1		10/12/19 12:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: YGWA-40 **Lab ID: 2624142002** Collected: 10/09/19 09:46 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	ND	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 20:32	7440-38-2	
Barium	**0.036**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 20:32	7440-39-3	
Beryllium	**0.00020J**	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 20:32	7440-41-7	
Boron	**0.079**	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 20:32	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 20:32	7440-43-9	
Calcium	**4.9**	mg/L	0.10	0.011	1	10/10/19 17:50	10/14/19 20:32	7440-70-2	
Chromium	**0.0012J**	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 20:32	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 20:32	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 20:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 20:32	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 20:32	7439-98-7	
Selenium	**0.0026J**	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 20:32	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**98.0**	mg/L	10.0	10.0	1		10/14/19 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.1**	mg/L	1.0	0.024	1		10/12/19 12:54	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/12/19 12:54	16984-48-8	
Sulfate	**27.9**	mg/L	1.0	0.017	1		10/12/19 12:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: YGWC-38 **Lab ID: 2624142003** Collected: 10/09/19 11:16 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	**0.00057J**	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 20:43	7440-38-2	
Barium	**0.019**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 20:43	7440-39-3	
Beryllium	**0.0046**	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 20:43	7440-41-7	
Boron	**13.5**	mg/L	2.0	0.25	50	10/10/19 17:50	10/14/19 20:49	7440-42-8	
Cadmium	**0.0021J**	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 20:43	7440-43-9	
Calcium	**133**	mg/L	5.0	0.55	50	10/10/19 17:50	10/14/19 20:49	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 20:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 20:43	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 20:43	7439-92-1	
Lithium	**0.0081J**	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 20:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 20:43	7439-98-7	
Selenium	**0.12**	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 20:43	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1100**	mg/L	10.0	10.0	1		10/14/19 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.0**	mg/L	1.0	0.024	1		10/12/19 13:16	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/12/19 13:16	16984-48-8	
Sulfate	**708**	mg/L	25.0	0.42	25		10/15/19 03:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: YGWC-41 **Lab ID: 2624142004** Collected: 10/09/19 14:02 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	**0.00052J**	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 20:55	7440-38-2	
Barium	**0.021**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 20:55	7440-39-3	
Beryllium	**0.0026J**	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 20:55	7440-41-7	
Boron	**8.6**	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 20:55	7440-42-8	
Cadmium	**0.00017J**	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 20:55	7440-43-9	
Calcium	**27.6**	mg/L	5.0	0.55	50	10/10/19 17:50	10/14/19 21:00	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 20:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 20:55	7440-48-4	
Lead	**0.00012J**	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 20:55	7439-92-1	
Lithium	**0.0032J**	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 20:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 20:55	7439-98-7	
Selenium	**0.052**	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 20:55	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**440**	mg/L	10.0	10.0	1		10/14/19 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	1.0	0.024	1		10/12/19 13:38	16887-00-6	B
Fluoride	ND	mg/L	0.30	0.029	1		10/12/19 13:38	16984-48-8	
Sulfate	**263**	mg/L	20.0	0.34	20		10/15/19 03:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: YGWC-42 **Lab ID: 2624142005** Collected: 10/09/19 13:55 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	**0.00078J**	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 21:06	7440-38-2	
Barium	**0.027**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 21:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 21:06	7440-41-7	
Boron	**16.6**	mg/L	2.0	0.25	50	10/10/19 17:50	10/14/19 21:12	7440-42-8	
Cadmium	**0.00025J**	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 21:06	7440-43-9	
Calcium	**92.0**	mg/L	5.0	0.55	50	10/10/19 17:50	10/14/19 21:12	7440-70-2	
Chromium	**0.00043J**	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 21:06	7440-47-3	
Cobalt	**0.0019J**	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 21:06	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 21:06	7439-92-1	
Lithium	**0.037**	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 21:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 21:06	7439-98-7	
Selenium	**0.042**	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 21:06	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1170**	mg/L	10.0	10.0	1		10/14/19 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.1**	mg/L	1.0	0.024	1		10/14/19 22:19	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/14/19 22:19	16984-48-8	
Sulfate	**725**	mg/L	20.0	0.34	20		10/15/19 17:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: YGWC-43 **Lab ID: 2624142006** Collected: 10/09/19 12:10 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	**0.00051J**	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 21:29	7440-38-2	
Barium	**0.040**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 21:29	7440-39-3	
Beryllium	**0.00034J**	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 21:29	7440-41-7	
Boron	**2.7**	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 21:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 21:29	7440-43-9	
Calcium	**18.2**	mg/L	5.0	0.55	50	10/10/19 17:50	10/14/19 21:35	7440-70-2	
Chromium	**0.00074J**	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 21:29	7440-47-3	
Cobalt	**0.0023J**	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 21:29	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 21:29	7439-92-1	
Lithium	**0.018J**	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 21:29	7439-93-2	
Molybdenum	**0.0012J**	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 21:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 21:29	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**501**	mg/L	10.0	10.0	1		10/14/19 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.3**	mg/L	1.0	0.024	1		10/14/19 23:25	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/14/19 23:25	16984-48-8	
Sulfate	**279**	mg/L	10.0	0.17	10		10/15/19 18:04	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: EB-1-10-9-19 **Lab ID: 2624142007** Collected: 10/09/19 13:00 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	ND	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 21:41	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 21:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 21:41	7440-41-7	
Boron	**0.0054J**	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 21:41	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 21:41	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	10/10/19 17:50	10/14/19 21:41	7440-70-2	
Chromium	**0.0077J**	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 21:41	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 21:41	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 21:41	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 21:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 21:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 21:41	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**23.0**	mg/L	10.0	10.0	1		10/14/19 11:53		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	1.0	0.024	1		10/14/19 23:47	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/14/19 23:47	16984-48-8	
Sulfate	**0.15J**	mg/L	1.0	0.017	1		10/14/19 23:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: DUP-1 **Lab ID: 2624142008** Collected: 10/09/19 00:00 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	ND	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 21:46	7440-38-2	
Barium	**0.013**	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 21:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 21:46	7440-41-7	
Boron	**0.020J**	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 21:46	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 21:46	7440-43-9	
Calcium	**2.3**	mg/L	0.10	0.011	1	10/10/19 17:50	10/14/19 21:46	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 21:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 21:46	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 21:46	7439-92-1	
Lithium	**0.0035J**	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 21:46	7439-93-2	
Molybdenum	**0.0018J**	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 21:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 21:46	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**115**	mg/L	10.0	10.0	1		10/15/19 17:19		D6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.1**	mg/L	1.0	0.024	1		10/15/19 00:09	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 00:09	16984-48-8	
Sulfate	**14.7**	mg/L	1.0	0.017	1		10/15/19 00:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates R6
Pace Project No.: 2624142

Sample: FB-1-10-9-19 **Lab ID: 2624142009** Collected: 10/09/19 12:10 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Arsenic	ND	mg/L	0.0050	0.00035	1	10/10/19 17:50	10/14/19 22:26	7440-38-2	
Barium	ND	mg/L	0.010	0.00049	1	10/10/19 17:50	10/14/19 22:26	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000074	1	10/10/19 17:50	10/14/19 22:26	7440-41-7	
Boron	ND	mg/L	0.040	0.0049	1	10/10/19 17:50	10/14/19 22:26	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00011	1	10/10/19 17:50	10/14/19 22:26	7440-43-9	
Calcium	ND	mg/L	0.10	0.011	1	10/10/19 17:50	10/14/19 22:26	7440-70-2	
Chromium	ND	mg/L	0.010	0.00039	1	10/10/19 17:50	10/14/19 22:26	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00030	1	10/10/19 17:50	10/14/19 22:26	7440-48-4	
Lead	ND	mg/L	0.0050	0.000046	1	10/10/19 17:50	10/14/19 22:26	7439-92-1	
Lithium	ND	mg/L	0.030	0.00078	1	10/10/19 17:50	10/14/19 22:26	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00095	1	10/10/19 17:50	10/14/19 22:26	7439-98-7	
Selenium	ND	mg/L	0.010	0.0013	1	10/10/19 17:50	10/14/19 22:26	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/15/19 17:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	1.0	0.024	1		10/15/19 00:32	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 00:32	16984-48-8	
Sulfate	**0.031J**	mg/L	1.0	0.017	1		10/15/19 00:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates R6
Pace Project No.: 2624142

QC Batch: 36815 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020B MET
Associated Lab Samples: 2624142001, 2624142002, 2624142003, 2624142004, 2624142005, 2624142006, 2624142007, 2624142008, 2624142009

METHOD BLANK: 166313 Matrix: Water
Associated Lab Samples: 2624142001, 2624142002, 2624142003, 2624142004, 2624142005, 2624142006, 2624142007, 2624142008, 2624142009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00035	10/14/19 18:02	
Barium	mg/L	ND	0.010	0.00049	10/14/19 18:02	
Beryllium	mg/L	ND	0.0030	0.000074	10/14/19 18:02	
Boron	mg/L	ND	0.040	0.0049	10/14/19 18:02	
Cadmium	mg/L	ND	0.0025	0.00011	10/14/19 18:02	
Calcium	mg/L	ND	0.10	0.011	10/14/19 18:02	
Chromium	mg/L	ND	0.010	0.00039	10/14/19 18:02	
Cobalt	mg/L	ND	0.0050	0.00030	10/14/19 18:02	
Lead	mg/L	ND	0.0050	0.000046	10/14/19 18:02	
Molybdenum	mg/L	ND	0.010	0.00095	10/14/19 18:02	
Selenium	mg/L	ND	0.010	0.0013	10/14/19 18:02	

LABORATORY CONTROL SAMPLE: 166314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Calcium	mg/L	1	0.97	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166315 166316

Parameter	Units	2624140001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.012J	1	1	0.92	0.93	91	92	75-125	1	20	
Calcium	mg/L	9.7	1	1	9.8	9.3	11	-46	75-125	6	20	M6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates R6
Pace Project No.: 2624142

QC Batch: 36914 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2624142001, 2624142002, 2624142003, 2624142004, 2624142005, 2624142006, 2624142007

LABORATORY CONTROL SAMPLE: 166870

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	366	92	84-108	

SAMPLE DUPLICATE: 166871

Parameter	Units	2624187005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	526	532	1	10	

SAMPLE DUPLICATE: 166872

Parameter	Units	2624140004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	18.0	13.0	32	10	D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates R6
Pace Project No.: 2624142

QC Batch: 36986
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 2624142008, 2624142009

LABORATORY CONTROL SAMPLE: 167157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	84-108	

SAMPLE DUPLICATE: 167158

Parameter	Units	2624142008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	115	101	13	10	D6

SAMPLE DUPLICATE: 167159

Parameter	Units	2624187019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	211	210	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates R6
Pace Project No.: 2624142

QC Batch: 36855 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624142001, 2624142002, 2624142003, 2624142004

METHOD BLANK: 166564 Matrix: Water
Associated Lab Samples: 2624142001, 2624142002, 2624142003, 2624142004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.44J	1.0	0.024	10/12/19 04:46	
Fluoride	mg/L	ND	0.30	0.029	10/12/19 04:46	
Sulfate	mg/L	ND	1.0	0.017	10/12/19 04:46	

LABORATORY CONTROL SAMPLE: 166565

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	10.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166566 166567

Parameter	Units	2624117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	35.5	10	10	39.4	39.9	38	44	90-110	1	15	M1

MATRIX SPIKE SAMPLE: 166568

Parameter	Units	2624140004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.030J	10	10.0	100	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	0.10J	10	10.1	100	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates R6
Pace Project No.: 2624142

QC Batch: 36938 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624142005, 2624142006, 2624142007, 2624142008, 2624142009

METHOD BLANK: 166950 Matrix: Water
Associated Lab Samples: 2624142005, 2624142006, 2624142007, 2624142008, 2624142009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.024	10/14/19 21:35	
Fluoride	mg/L	ND	0.30	0.029	10/14/19 21:35	
Sulfate	mg/L	ND	1.0	0.017	10/14/19 21:35	

LABORATORY CONTROL SAMPLE: 166951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.7	97	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166952 166953

Parameter	Units	2624142005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.1	10	10	13.6	13.6	95	95	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.9	9.8	99	98	90-110	1	15	

MATRIX SPIKE SAMPLE: 166954

Parameter	Units	2624142006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.3	10	12.1	97	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	279	10	23.4	-2560	90-110	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates R6
Pace Project No.: 2624142

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates R6
Pace Project No.: 2624142

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624142001	**YGWA-39**	EPA 3005A	36815	EPA 6020B	36833
2624142002	**YGWA-40**	EPA 3005A	36815	EPA 6020B	36833
2624142003	**YGWC-38**	EPA 3005A	36815	EPA 6020B	36833
2624142004	**YGWC-41**	EPA 3005A	36815	EPA 6020B	36833
2624142005	**YGWC-42**	EPA 3005A	36815	EPA 6020B	36833
2624142006	**YGWC-43**	EPA 3005A	36815	EPA 6020B	36833
2624142007	**EB-1-10-9-19**	EPA 3005A	36815	EPA 6020B	36833
2624142008	**DUP-1**	EPA 3005A	36815	EPA 6020B	36833
2624142009	**FB-1-10-9-19**	EPA 3005A	36815	EPA 6020B	36833
2624142001	**YGWA-39**	SM 2540C	36914		
2624142002	**YGWA-40**	SM 2540C	36914		
2624142003	**YGWC-38**	SM 2540C	36914		
2624142004	**YGWC-41**	SM 2540C	36914		
2624142005	**YGWC-42**	SM 2540C	36914		
2624142006	**YGWC-43**	SM 2540C	36914		
2624142007	**EB-1-10-9-19**	SM 2540C	36914		
2624142008	**DUP-1**	SM 2540C	36986		
2624142009	**FB-1-10-9-19**	SM 2540C	36986		
2624142001	**YGWA-39**	EPA 300.0	36855		
2624142002	**YGWA-40**	EPA 300.0	36855		
2624142003	**YGWC-38**	EPA 300.0	36855		
2624142004	**YGWC-41**	EPA 300.0	36855		
2624142005	**YGWC-42**	EPA 300.0	36938		
2624142006	**YGWC-43**	EPA 300.0	36938		
2624142007	**EB-1-10-9-19**	EPA 300.0	36938		
2624142008	**DUP-1**	EPA 300.0	36938		
2624142009	**FB-1-10-9-19**	EPA 300.0	36938		

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

CLIENT NAME: Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - R6

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III Boron, Calcium (P, 3)	Cl, F, SO_4 & TDS (EPA 300.0 & SM 2540C) (P, 7)	Detected App IV: Radium 226 & 228 (SW-846 9315/9320) (P, 3)	Detected App IV Metals: (See list below) (P, 3)	LAB ID NUMBER
10-9-19	1045	GW		✓	YGWA-39	4	✓	✓	✓	✓	1
10-9-19	0946	GW		✓	YGWA-40	4	✓	✓	✓	✓	2
10-9-19	1116	GW		✓	YGWC-38	4	✓	✓	✓	✓	3
10-9-19	1402	GW		✓	YGWC-41	4	✓	✓	✓	✓	4
10-9-19	1355	GW		✓	YGWC-42	4	✓	✓	✓	✓	5
10-9-19	1210	GW		✓	YGWC-43	4	✓	✓	✓	✓	6
10-9-19	1300	W		✓	EB-1-10-9-19	4	✓	✓	✓	✓	7
10-9-19	—	GW		✓	DUP-1	4	✓	✓	✓	✓	8
10-9-19	1210	W		✓	FB-1-10-9-19	4	✓	✓	✓	✓	9

CONTAINER TYPE / PRESERVATION

CONTAINER TYPE	PRESERVATION
P - PLASTIC	1 - HCl, ≤6°C
A - AMBER GLASS	2 - H_2SO_4, ≤6°C
G - CLEAR GLASS	3 - HNO_3
V - VOA VIAL	4 - NaOH, ≤6°C
S - STERILE	5 - NaOH/ZnAc, ≤6°C
O - OTHER	6 - $Na_2S_2O_3$, ≤6°C
	7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER	S - SOIL
WW - WASTEWATER	SL - SLUDGE
GW - GROUNDWATER	SD - SOLID
SW - SURFACE WATER	A - AIR
ST - STORM WATER	L - LIQUID
W - WATER	P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

SAMPLED BY AND TITLE: [signature] ACC — DATE/TIME: see above

RELINQUISHED BY: [signature] — DATE/TIME: 10-9-19/1700

RECEIVED BY: — DATE/TIME:

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: [signature] — DATE/TIME: 10/9/19 1700

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHE

pH checked: Yes No NA — Ice: Yes No NA — Temperature: Min: Max:

Custody Seal: Intact Broken Not Present — # of Coolers — Cooler ID:

FOR LAB USE ONLY
LAB #:

WO# : 2624142

2624142

Detected App IV Metals: Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium

Pace Analytical

Sample Condition Upon Receip

WO# : 2624142

Client Name: Georgia Power

PM: BM Due Date: 10/16/19

CLIENT: GAPower-CCR

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

Tracking #: _____

Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used 214 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.8C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 10/9/19 CDH

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 12, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates R6
Pace Project No.: 2624143

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 09, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates R6
Pace Project No.: 2624143

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Plant Yates R6
Pace Project No.: 2624143

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624143001	**YGWA-39**	Water	10/08/19 10:45	10/09/19 17:00
2624143002	**YGWA-40**	Water	10/08/19 09:46	10/09/19 17:00
2624143003	**YGWC-38**	Water	10/08/19 11:16	10/09/19 17:00
2624143004	**YGWC-41**	Water	10/08/19 14:02	10/09/19 17:00
2624143005	**YGWC-42**	Water	10/08/19 13:55	10/09/19 17:00
2624143006	**YGWC-43**	Water	10/08/19 12:10	10/09/19 17:00
2624143007	**EB-1-10-9-19**	Water	10/08/19 13:00	10/09/19 17:00
2624143008	**DUP-1**	Water	10/08/19 00:00	10/09/19 17:00
2624143009	**FB-1-10-9-19**	Water	10/08/19 12:10	10/09/19 17:00

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SAMPLE ANALYTE COUNT

Project: Plant Yates R6
Pace Project No.: 2624143

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624143001	**YGWA-39**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143002	**YGWA-40**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143003	**YGWC-38**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143004	**YGWC-41**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143005	**YGWC-42**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143006	**YGWC-43**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143007	**EB-1-10-9-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143008	**DUP-1**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2624143009	**FB-1-10-9-19**	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: YGWA-39 **Lab ID: 2624143001** Collected: 10/08/19 10:45 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.455 ± 0.258 (0.420) C:92% T:NA**	pCi/L	11/04/19 08:29	13982-63-3	
Radium-228	EPA 9320	**0.562 ± 0.403 (0.787) C:69% T:89%**	pCi/L	11/01/19 12:30	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.661 (1.21)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: YGWA-40 **Lab ID: 2624143002** Collected: 10/08/19 09:46 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.672 ± 0.287 (0.325) C:84% T:NA**	pCi/L	11/04/19 08:29	13982-63-3	
Radium-228	EPA 9320	**0.194 ± 0.483 (1.07) C:63% T:89%**	pCi/L	11/01/19 13:20	15262-20-1	
Total Radium	Total Radium Calculation	**0.866 ± 0.770 (1.40)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: YGWC-38 **Lab ID: 2624143003** Collected: 10/08/19 11:16 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.710 ± 0.294 (0.366) C:91% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**0.0412 ± 0.840 (1.92) C:56% T:84%**	pCi/L	11/01/19 15:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.751 ± 1.13 (2.29)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: YGWC-41 **Lab ID: 2624143004** Collected: 10/08/19 14:02 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.496 ± 0.250 (0.369) C:92% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**0.113 ± 0.652 (1.48) C:69% T:78%**	pCi/L	11/01/19 15:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.609 ± 0.902 (1.85)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: YGWC-42 **Lab ID: 2624143005** Collected: 10/08/19 13:55 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.706 ± 0.274 (0.273) C:95% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**0.289 ± 0.783 (1.74) C:65% T:76%**	pCi/L	11/01/19 15:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.995 ± 1.06 (2.01)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: YGWC-43 **Lab ID: 2624143006** Collected: 10/08/19 12:10 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**3.35 ± 0.712 (0.363) C:95% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**0.295 ± 0.769 (1.71) C:63% T:84%**	pCi/L	11/01/19 15:49	15262-20-1	
Total Radium	Total Radium Calculation	**3.65 ± 1.48 (2.07)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: EB-1-10-9-19 **Lab ID: 2624143007** Collected: 10/08/19 13:00 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.403 ± 0.208 (0.277) C:97% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**0.381 ± 0.307 (0.609) C:71% T:99%**	pCi/L	11/01/19 15:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.784 ± 0.515 (0.886)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: DUP-1 **Lab ID: 2624143008** Collected: 10/08/19 00:00 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.584 ± 0.246 (0.275) C:96% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**0.393 ± 0.309 (0.602) C:75% T:83%**	pCi/L	11/01/19 15:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.977 ± 0.555 (0.877)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

Sample: FB-1-10-9-19 **Lab ID: 2624143009** Collected: 10/08/19 12:10 Received: 10/09/19 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	**0.467 ± 0.234 (0.317) C:97% T:NA**	pCi/L	11/04/19 08:30	13982-63-3	
Radium-228	EPA 9320	**-0.341 ± 0.283 (0.734) C:74% T:85%**	pCi/L	11/01/19 15:44	15262-20-1	
Total Radium	Total Radium Calculation	**0.467 ± 0.517 (1.05)**	pCi/L	11/04/19 14:35	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

QC Batch: 366966 Analysis Method: EPA 9315
QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
Associated Lab Samples: 2624143001, 2624143002, 2624143003, 2624143004, 2624143005, 2624143006, 2624143007, 2624143008, 2624143009

METHOD BLANK: 1780028 Matrix: Water
Associated Lab Samples: 2624143001, 2624143002, 2624143003, 2624143004, 2624143005, 2624143006, 2624143007, 2624143008, 2624143009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.371 ± 0.194 (0.239) C:96% T:NA	pCi/L	11/04/19 08:29	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant Yates R6
Pace Project No.: 2624143

QC Batch: 366967 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Associated Lab Samples: 2624143001, 2624143002, 2624143003, 2624143004, 2624143005, 2624143006, 2624143007, 2624143008, 2624143009

METHOD BLANK: 1780030 Matrix: Water
Associated Lab Samples: 2624143001, 2624143002, 2624143003, 2624143004, 2624143005, 2624143006, 2624143007, 2624143008, 2624143009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0313 ± 0.302 (0.696) C:73% T:90%	pCi/L	11/01/19 12:27	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Yates R6
Pace Project No.: 2624143

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates R6
Pace Project No.: 2624143

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624143001	**YGWA-39**	EPA 9315	366966		
2624143002	**YGWA-40**	EPA 9315	366966		
2624143003	**YGWC-38**	EPA 9315	366966		
2624143004	**YGWC-41**	EPA 9315	366966		
2624143005	**YGWC-42**	EPA 9315	366966		
2624143006	**YGWC-43**	EPA 9315	366966		
2624143007	**EB-1-10-9-19**	EPA 9315	366966		
2624143008	**DUP-1**	EPA 9315	366966		
2624143009	**FB-1-10-9-19**	EPA 9315	366966		
2624143001	**YGWA-39**	EPA 9320	366967		
2624143002	**YGWA-40**	EPA 9320	366967		
2624143003	**YGWC-38**	EPA 9320	366967		
2624143004	**YGWC-41**	EPA 9320	366967		
2624143005	**YGWC-42**	EPA 9320	366967		
2624143006	**YGWC-43**	EPA 9320	366967		
2624143007	**EB-1-10-9-19**	EPA 9320	366967		
2624143008	**DUP-1**	EPA 9320	366967		
2624143009	**FB-1-10-9-19**	EPA 9320	366967		
2624143001	**YGWA-39**	Total Radium Calculation	369282		
2624143002	**YGWA-40**	Total Radium Calculation	369282		
2624143003	**YGWC-38**	Total Radium Calculation	369282		
2624143004	**YGWC-41**	Total Radium Calculation	369282		
2624143005	**YGWC-42**	Total Radium Calculation	369282		
2624143006	**YGWC-43**	Total Radium Calculation	369282		
2624143007	**EB-1-10-9-19**	Total Radium Calculation	369282		
2624143008	**DUP-1**	Total Radium Calculation	369282		
2624143009	**FB-1-10-9-19**	Total Radium Calculation	369282		

AIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 30092
(770) 734-4200 : FAX (770) 734-4201

NT NAME: Georgia Power

NT ADDRESS/PHONE NUMBER/FAX NUMBER:
Ralph McGill Blvd SE B10185
ita, GA 30308
506-7239

ORT TO: Joju Abraham

UESTED COMPLETION DATE:
PO #:

JECT NAME/STATE: Plant Yates - R6

JECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. III Boron, Calcium (P, 3)	Cl, F, SO4 & TDS (EPA 300.0 & SM 2540C) (P, 7)	Detected App IV: Radium 226 & 228 (SW-846 9315/9320) (P, 3)	Detected App IV Metals: (See list below) (P, 3)	LAB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
-9-19	1045	GW		✓	YGWA-39	4	✓	✓	✓	✓	1	
-9-19	0946	GW		✓	YGWA-40	4	✓	✓	✓	✓	2	
-9-19	1116	GW		✓	YGWC-38	4	✓	✓	✓	✓	3	
-9-19	1402	GW		✓	YGWC-41	4	✓	✓	✓	✓	4	
-9-19	1355	GW		✓	YGWC-42	4	✓	✓	✓	✓	5	
-9-19	1210	GW		✓	YGWC-43	4	✓	✓	✓	✓	6	
-9-19	1300	W		✓	EB-1-10-9-19	4	✓	✓	✓	✓	7	
-9-19	—	GW		✓	DUP-1	4	✓	✓	✓	✓	8	
-9-19	1210	W		✓	FB-1-10-9-19	4	✓	✓	✓	✓	9	

CONTAINER TYPE
P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

PRESERVATION
1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:
DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

MPLED BY AND TITLE: [signature] ACC
DATE/TIME: see above
RELINQUISHED BY: [signature]
DATE/TIME: 10-9-19/1700

CEIVED BY:
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

CEIVED BY LAB: [signature]
DATE/TIME: 10/9/19 1700

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER (CLIENT) OTHER FS
# of Coolers
Cooler ID:

checked: YES NO NA
Ice: (Yes) No NA
Temperature: Min: 1.8°C Max:
Custody Seal: (Intact) Broken Not Present

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

WO#: 2624143

2624143

tected App IV Metals: Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Lithium, Molybdenum, Selenium

Yates - Blank COCs

Pace Analytical

Sample Condition Upon Receipt

WO#: 2624143

Client Name: Georgia Power

PM: BM Due Date: 11/06/19

CLIENT: GAPower-CCR

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

Tracking #: _____

Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used 214 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.8 C **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/9/19 CDH

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Product Name: Low-Flow System

Date: 2019-10-09 10:45:04

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	68 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	63 ft

Well Information:		Pumping Information:	
Well ID	YGWA-39	Final Pumping Rate	260 mL/min
Well diameter	2 in	Total System Volume	1.141386 L
Well Total Depth	68.50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7 in
Depth to Water	23.85 ft	Total Volume Pumped	10.5 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:21:43	600.01	21.33	5.79	124.35	2.03	24.30	0.13	52.37
Last 5	10:26:43	900.06	21.09	5.81	121.57	2.21	24.30	0.08	51.88
Last 5	10:31:43	1200.01	21.23	5.81	113.84	1.90	24.40	0.08	53.51
Last 5	10:36:43	1499.99	19.81	5.81	113.14	1.63	24.40	0.10	54.62
Last 5	10:41:47	1803.98	20.33	5.81	109.37	1.52	24.40	0.10	56.02
Variance 0			0.13	0.00	-7.73			-0.00	1.63
Variance 1			-1.42	-0.00	-0.70			0.02	1.11
Variance 2			0.52	-0.00	-3.77			-0.00	1.40

Notes

Sampled at 10:45. Cloudy 60s. DUP 1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 09:46:56

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	R6	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	48 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	YGWA-40	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.6042444 L
Well Total Depth	48.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10 in
Depth to Water	28.00 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	09:26:22	600.06	18.35	5.19	109.34	1.12	28.80	5.58	80.60
Last 5	09:31:22	900.01	18.30	5.22	109.97	1.47	28.80	5.59	79.19
Last 5	09:36:22	1200.00	18.30	5.21	110.48	1.48	28.80	5.60	79.77
Last 5	09:41:22	1500.00	18.30	5.19	110.50	1.22	28.80	5.60	82.67
Last 5	09:46:22	1799.99	18.25	5.22	110.63	1.28	28.80	5.61	79.58
Variance 0			0.00	-0.02	0.51			0.01	0.58
Variance 1			0.00	-0.02	0.02			0.00	2.90
Variance 2			-0.06	0.03	0.13			0.01	-3.09

Notes

Sampled at 09:46. Cloudy, 60’s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 11:17:16

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWC-38	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.8726366 L
Well Total Depth	50.12 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	10:56:16	600.02	18.24	4.79	1259.56	2.64	--	2.19	102.84
Last 5	11:01:16	900.01	18.26	4.79	1254.56	1.77	--	2.13	102.38
Last 5	11:06:16	1200.00	18.26	4.81	1258.27	1.54	--	2.10	102.31
Last 5	11:11:17	1501.00	18.30	4.80	1259.74	1.31	--	2.14	102.04
Last 5	11:16:17	1800.99	18.29	4.80	1260.45	1.22	--	2.09	101.81
Variance 0			-0.00	0.02	3.70			-0.02	-0.07
Variance 1			0.04	-0.01	1.47			0.04	-0.26
Variance 2			-0.00	0.00	0.71			-0.06	-0.24

Notes

Sampled at 11:16. Cloudy, 70's. Transducer in well. Unable to get WL readings. FB-1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 14:03:11

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	R6	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	67 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	62 ft

Well Information:		Pumping Information:	
Well ID	YGWC-41	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.6890493 L
Well Total Depth	67.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	28.87 ft	Total Volume Pumped	14.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	13:42:32	3300.97	18.81	4.86	583.69	0.96	29.60	4.47	92.36
Last 5	13:47:32	3600.96	18.79	4.86	583.30	1.01	29.60	4.61	92.48
Last 5	13:52:32	3900.95	18.85	4.86	583.50	0.86	29.60	4.71	92.43
Last 5	13:57:32	4200.95	18.80	4.86	581.80	1.22	29.60	4.80	92.53
Last 5	14:02:32	4500.94	18.79	4.86	578.39	1.03	29.60	4.94	92.74
Variance 0			0.05	0.00	0.20			0.10	-0.05
Variance 1			-0.05	-0.00	-1.70			0.09	0.10
Variance 2			-0.00	-0.00	-3.41			0.14	0.21

Notes

Sampled at 14:02. Cloudy, 80’s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 13:56:55

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-42	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	60.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	29 in
Depth to Water	30.0 ft	Total Volume Pumped	9.8 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:33:18	2399.97	19.85	5.51	1269.37	3.81	32.30	1.27	116.53
Last 5	13:38:18	2699.96	18.73	5.50	1307.29	3.72	32.30	1.39	115.74
Last 5	13:43:18	2999.96	20.92	5.50	1242.56	3.67	32.40	1.29	115.40
Last 5	13:48:18	3299.94	21.55	5.50	1246.58	3.59	32.40	1.34	114.49
Last 5	13:53:18	3599.93	19.84	5.50	1293.22	3.38	32.40	1.44	113.87
Variance 0			2.19	-0.00	-64.73			-0.11	-0.34
Variance 1			0.63	-0.00	4.03			0.05	-0.90
Variance 2			-1.71	-0.00	46.64			0.10	-0.63

Notes

Sampled at 13:55. Cloudy 70s. EB 1 here at 13:00 - gloves

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 12:11:24

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWC-43	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	17.18 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:46:57	300.02	20.05	6.18	431.04	5.84	17.20	0.63	12.03
Last 5	11:51:57	600.01	20.82	5.74	555.54	5.02	17.30	0.32	47.44
Last 5	11:56:57	900.00	19.96	5.76	589.69	4.38	17.30	0.15	47.52
Last 5	12:01:57	1200.00	20.71	5.77	588.23	3.40	17.40	0.07	46.02
Last 5	12:06:57	1499.99	21.05	5.78	596.18	3.12	17.40	0.06	44.91
Variance 0			-0.85	0.02	34.15			-0.17	0.07
Variance 1			0.75	0.01	-1.46			-0.09	-1.49
Variance 2			0.34	0.01	7.95			-0.00	-1.11

Notes

Sampled at 12:10. Cloudy 70s

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

December 13, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on December 09, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2626583001	**YGWC-36**	Water	12/09/19 14:26	12/09/19 15:55

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2626583001	**YGWC-36**	EPA 6020B	CSW	1

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

Sample: YGWC-36 **Lab ID: 2626583001** Collected: 12/09/19 14:26 Received: 12/09/19 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Antimony	**0.0014J**	mg/L	0.0030	0.00027	1	12/12/19 19:34	12/13/19 16:13	7440-36-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

QC Batch: 40431
QC Batch Method: EPA 3005A
Analysis Method: EPA 6020B
Analysis Description: 6020B MET
Associated Lab Samples: 2626583001

METHOD BLANK: 183857
Matrix: Water
Associated Lab Samples: 2626583001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00027	12/13/19 16:01	

LABORATORY CONTROL SAMPLE: 183858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	111	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 183859 183860

Parameter	Units	2626583001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	0.0014J	0.1	0.1	0.11	0.11	112	109	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626583

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2626583001	**YGWC-36**	EPA 3005A	40431	EPA 6020B	40445

CHAIN OF CUSTODY RECORD

Pace Analytical

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 3009
(770) 734-4200 : FAX (770) 734-4201

WO# : 2626583

2626583

CLIENT NAME: Georgia Power
Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS		CONTAINER TYPE: P / PRESERVATION: 3 Metals App. IV (EPA 6020) Antimony	AB ID NUMBER	REMARKS/ADDITIONAL INFORMATION
12/9/19	1426	GW		X	YGWC-36	1		✓		Antimony only

P - PLASTIC
A - AMBER GLASS
G - CLEAR GLASS
V - VOA VIAL
S - STERILE
O - OTHER

1 - HCl, ≤6°C
2 - H_2SO_4, ≤6°C
3 - HNO_3
4 - NaOH, ≤6°C
5 - NaOH/ZnAc, ≤6°C
6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER
WW - WASTEWATER
GW - GROUNDWATER
SW - SURFACE WATER
ST - STORM WATER
W - WATER
S - SOIL
SL - SLUDGE
SD - SOLID
A - AIR
L - LIQUID
P - PRODUCT

SAMPLED BY AND TITLE: Ryan Walker ACC
DATE/TIME: 12/9/19 / 1426
RELINQUISHED BY:
DATE/TIME: 12/9/19 / 1555

RECEIVED BY: R. Wellington/PACE
DATE/TIME:
RELINQUISHED BY:
DATE/TIME:

RECEIVED BY LAB:
DATE/TIME:
SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA
Ice: Yes No NA
Temperature: Min: 0-2 Max:
Custody Seal: Intact Broken Not Present
# of Coolers: 1
Cooler ID:

FOR LAB USE ONLY
LAB #:
Entered into LIMS:
Tracking #:

Pace Analytical

Client Name: Georgia Power P

WO#: 2626583

PM: KH Due Date: 12/16/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other ___

Tracking #: _____

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used IR2083 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C Comments:

Date and initials of person examining contents: KW

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.	
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☒N/A	6.	
Rush Turn Around Time Requested:	☐Yes ☐No ☒N/A	7.	
Sufficient Volume:	☒Yes ☐No ☐N/A	8.	
Correct Containers Used:	☒Yes ☐No ☐N/A	9.	
-Pace Containers Used:	☒Yes ☐No ☐N/A		
Containers Intact:	☒Yes ☐No ☐N/A	10.	
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.	
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.	
-Includes date/time/ID/Analysis Matrix: GW			
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☒Yes ☐No ☐N/A	Initial when completed KW 12.10.19	Lot # of added preservative
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No		
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.	
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.	
Trip Blank Present:	☐Yes ☐No ☒N/A	16.	
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A		
Pace Trip Blank Lot # (if purchased):			

Field Data Required? Y / N

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

3000 W28

Project Manager Review: _____ Date: _____

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

F-ALLC003rev.3, 11September2006

Product Name: Low-Flow System

Date: 2019-12-09 14:27:43

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED Bladder
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.25 in
Site Name	Plant Yates AP3	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	573204		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-36	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.9691639 L
Well Total Depth	60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	14:06:40	900.03	18.61	5.32	173.36	2.02	--	3.45	183.06
Last 5	14:11:41	1201.02	18.56	5.27	172.92	1.95	--	3.46	184.38
Last 5	14:16:42	1502.01	18.51	5.27	173.02	1.92	--	3.44	184.11
Last 5	14:21:43	1803.01	18.51	5.24	173.11	1.86	--	3.43	184.00
Last 5	14:26:44	2103.99	18.52	5.21	173.37	1.65	0.00	3.41	186.79
Variance 0			-0.04	-0.01	0.10			-0.01	-0.27
Variance 1			-0.00	-0.03	0.09			-0.02	-0.11
Variance 2			0.01	-0.03	0.26			-0.01	2.79

Notes

Sampled at 15:26. Cloudy, 60's. Transducer in well. Unable to obtain WL.

Grab Samples

APPENDIX B

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

SUPPLEMENTAL SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

GEORGIA POWER COMPANY

PLANT YATES

Ash Ponds 3, A, B, and B'

January 31, 2020

Prepared By:

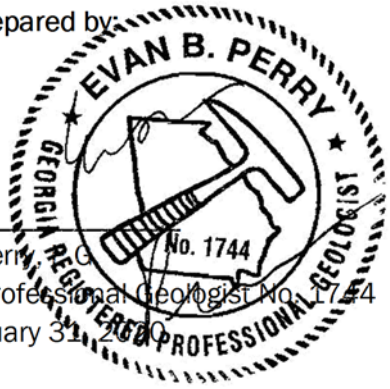
SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

GEORGIA POWER COMPANY - PLANT YATES

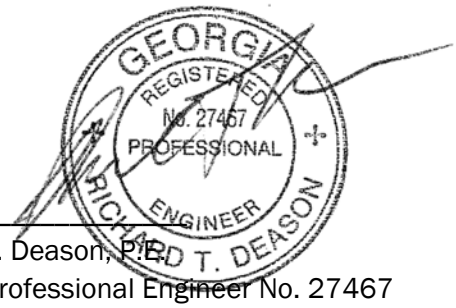
Ash Ponds 3, A, B, and B'

This *Semiannual Period Remedy Selection and Design Progress Report, Georgia Power Company – Plant Yates, Ash Pond 3, A, B, and B',* has been prepared in accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule, 40 CFR § 257.97(a), and Georgia EPD Rule 391-3-4-.10(6)(a).

Report Prepared by:



Evan B. Perry, P.G.
Georgia Professional Geologist No. 1744
Date: January 31, 2020



Richard T. Deason, P.E.
Georgia Professional Engineer No. 27467
Date: January 31, 2020

Table of Contents

Table

Figure

Appendix

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015) (CCR Rule or The Rule), this Semiannual Remedy Selection and Design Progress Report (Semiannual Progress Report) has been prepared for Plant Yates, Ash Ponds 3, A, B, and B' pursuant to 40 CFR § 257.97(a) and Georgia EPD Rule 391-3-4-.10(6)(a). The Semiannual Progress Report was prepared to document activities conducted since submittal of the Assessment of Corrective Measures (ACM) Report on June 12, 2019. As required by the rules, the first semiannual progress report in selecting and designing a remedy was submitted on December 12, 2019. This report provides a supplementary update for activities performed towards remedy selection since December 12, 2019. Submission of this supplementary report will allow future semi-annual ACM update report submittal due dates to align with routine semiannual groundwater monitoring and corrective action reporting timelines.

On June 12, 2019, Atlantic Coast Consulting, Inc. (ACC) completed, on behalf of Georgia Power Company (GPC), an ACM to address the occurrence of beryllium in groundwater at statistically significant levels (SSL). The ACM was placed in the site's operating record and posted to the site's CCR Rule Compliance website. Pursuant to 40 CFR § 257.97, GPC is evaluating the potential remedies presented in the ACM in order to identify an appropriate remedy, or combination of remedies, as soon as feasible. Since the completion of the ACM Report in June 2019, cobalt was also identified in groundwater at an SSL above the groundwater protection standard. The cobalt results were documented in the 2019 First Semiannual Groundwater Monitoring and Corrective Action Report and documented in a notification dated August 15, 2019. The current SSLs for beryllium and cobalt at YGWC-33S are provided in Table 1, Appendix IV Statistically Significant Levels.

As discussed in the ACM, the following corrective measures are potentially feasible for use at the site:

1. Geochemical Manipulation (In-Situ Injection)
2. Hydraulic Containment (Pump and Treat)
3. In Situ Stabilization/Solidification (ISS)
4. Monitored Natural Attenuation (MNA)
5. Permeable Reactive Barrier
6. Phytoremediation
7. Subsurface Vertical Barrier Walls

Data obtained during on-site investigation to evaluate corrective action alternatives will be included in the Annual Groundwater Monitoring and Corrective Action Report as required by 40 CFR § 257.90(e).

2.0 SUMMARY OF WORK COMPLETED

2.1 Nature and Extent Delineation

Groundwater monitoring activities have been performed for Ash Pond 3, A, B, and B' since June 2016 pursuant to detection monitoring and assessment monitoring programs required by 40 CFR § 257.94 and 40 CFR § 257.95, respectively. Following the first detection monitoring event in October 2017, statistically significant increases (SSIs) of Appendix III parameters were noted. The Appendix III SSIs initiated assessment monitoring for Appendix IV constituents. Statistical analysis of the June and October 2018 analytical data identified an SSL for beryllium in YGWC-33S, and GPC initiated an ACM on January 13, 2019. Statistical analysis of data collected in April 2019 and reported in the August 2019 semiannual groundwater monitoring report also identified cobalt as an SSL at YGWC-33S.

Downgradient horizontal and vertical delineation wells (PZ-35 and YAMW-1, respectively) have been established to delineate the downgradient extent of SSLs. Existing groundwater monitoring network locations for Ash Ponds 3, A, B, and B' and Ash Pond 2, provide additional downgradient data. The SSLs at YGWC-33S are horizontally and vertically delineated at the site.

2.2 Summary of Corrective Measures

The closure of Ash Pond 3, A, B, and B' by excavation and consolidation of the CCR material is a source control measure that reduces the potential for migration of CCR constituents to groundwater. The corrective measures proposed in the ACM are being evaluated to address the SSL of beryllium in groundwater at and downgradient of the compliance boundary. Each individual corrective measure is evaluated relative to criteria specified in 40 CFR § 257.96(c) and 40 CFR § 257.97(b). A comparative screening of the corrective measures for beryllium is provided in Table 2, Remedy Evaluation Summary; the following provides a brief description of each corrective measure being screened. An ACM evaluation for the cobalt SSL will be incorporated into the next Semiannual Remedy Selection Update Report.

Table 1, Summary of Activity, presents a summary of activities that have been completed for each potential remedy during the previous semi-annual period:

2.3 Field Investigation and Data Collection

Additional data collection, data analysis, and site-specific evaluation were performed during the second half of 2019 and January 2020 at Ash Ponds 3, A, B, and B' to refine the Conceptual Site Model (CSM) and to further evaluate the feasibility of each corrective measure presented herein such that an appropriate groundwater corrective measure may be selected. To further refine the CSM, additional data was also collected at R6 CCR Landfill, which is adjacent to Ash Ponds 3, A, B, and B'. Data collected are highlighted as follows.

- Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, ferrous/ferric iron, and total organic carbon (TOC) from the entire AP-3, A, B, and B' monitoring network, including the location of statistical exceedances (YGWC-33S), horizonal extent well (PZ-35), and vertical extent well (YAMW-1). The groundwater monitoring locations are shown on Figure 1, Well Location Map.
- Collected geochemical data to evaluate groundwater parameter concentrations relative to NPDES limits and wastewater treatment capabilities.
- Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options.
- Logged continuous hourly water level data in wells YGWA-21I, YGWC-23S, YGWC-33S, YGWC-36, and PZ-37.
- Collected and analyzed samples from two delineation wells (YAMW-1 and PZ-35) on September 26, 2019 for beryllium and cobalt (to verify limited extent of SSL exceedances, plus Appendix III and other Appendix IV constituents detected during assessment monitoring (antimony, barium, cadmium, lead, lithium, selenium, and thallium).
- Collected and analyzed samples from YAMW-1 on December 9, 2019 and January 3, 2020 for cobalt.

Laboratory analytical reports and field sampling data collected during the second half of 2019 and January 2020 are provided in Appendix A, Laboratory Analytical Reports and Field Sampling Data. Table 3, Summary of Recent Activity, presents a summary of activities that have been completed for each potential remedy during the second half of 2019 and January 2020. Table 4, Summary of Laboratory Analytical Data, summarizes the laboratory data included in Appendix A.

2.4 Well Installation Activities

Additional assessment wells were installed at R6 CCR Landfill in November 2019. Assessment groundwater monitoring wells YAMW-3 and YAMW-4 have been installed to vertically assess groundwater at YGWC-41 and YGWC-42, respectively. Assessment groundwater monitoring well YAMW-2 has been installed to horizontally assess YGWC-41 and YGWC-42. Assessment groundwater monitoring well YAMW-5 has been installed to vertically assess YGWC-38. Piezometer PZ-51 has been installed to characterize groundwater conditions near YGWC-43. These locations are depicted on Figure 1 and construction details provided in Appendix B, Boring Logs and Well Construction Diagrams.

3.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

As part of the ongoing closure of Ash Pond 3, A, B, and B' dewatering has been initiated. A drainage channel has been constructed between the unit and R6 CCR Landfill to allow for the dewatering of the unit. During pond closure, temporary and permanent changes (e.g., dewatering and relocation of material) may occur that will need to be considered as part of remedy selection. GPC proactively initiated adaptive site management, as outlined in the ACM Report (ACC, 2019), to support the remedial strategy and address potential changes in site conditions as appropriate. The adaptive site management approach may be adjusted over the site's life cycle as new site information and technologies become available. To this end, GPC will continue its data collection efforts as necessary in support of efforts to refine the CSM and to further evaluate the feasibility of each corrective measure proposed in the ACM Report. Once sufficient data become available to arrive at a focused number of corrective measures or a combination of corrective measures that would provide an effective groundwater remedy, necessary steps will be taken to implement a remedy for the AMA in accordance with 40 CFR § 257.98.

The following activities are planned for the upcoming semi-annual period (through July 2020):

- Collect and analyze aquifer solids for similar analytes to groundwater and perform XRD analysis for mineralogy to assist in understanding the type of geochemical amendments that might be useful for attenuation of relevant constituents.
- Resample relevant monitoring and delineation wells for additional characterization evaluation parameters. Also collect groundwater samples for specific analytes applicable to surface water discharge criteria (i.e. consider NPDES permit requirements). Multiple data sets will be needed to assess temporal variations in conditions.
- Sample delineation locations for Appendix III and other Appendix IV constituents detected during assessment monitoring.
- Perform geochemical assessment of groundwater characteristics in the vicinity of YGWC-33S.
- Additional hydraulic conductivity testing of relevant monitoring wells and delineation wells to further characterize the groundwater flow system.

GPC will include future semiannual ACM progress reports in routine groundwater monitoring reports to document groundwater conditions, results associated with additional data gathering, and the progress in selecting and designing the remedy in accordance with 40 CFR § 257.97(a). Record keeping, notifications, and publicly accessible internet site requirements for the semiannual ACM progress reports will be provided in accordance with 40 CFR § 257.105(h)(12), 257.106(h)(9), and 257.107(h)(9), respectively.

TABLES

Atlantic Coast Consulting, Inc.

Table 1
Appendix IV Statistically Significant Levels
Plant Yates AP-3/A/B/B'

Constituent	Well	Upper Confidence Limit	Lower Confidence Limit	MCL
Beryllium	YGWC-33S	0.019	0.014	0.004
Cobalt	YGWC-33S	0.027	0.014	0.013*

Notes:

1. Units are milligrams per liter
2. MCL = maximum contaminant level
3. * No MCL established for cobalt; site background is referenced.
4. Data are from 2019 Groundwater Monitoring and Corrective Action Report.

Table 2
Remedy Evaluation Summary
Plant Yates AP-3/A/B/B'

Corrective Measure	Description	Ease of Implementation	Performance	Potential Impacts	Reliability
		40 CFR 257.96(c)(1)	40 CFR 257.96(c)(1)	40 CFR 257.96(c)(1)	40 CFR 257.96(c)(1)
Geochemical Manipulation (In Situ Injection)	Injection of a chemical or organic substrate to alter geochemical conditions to those more favorable for stabilization of beryllium. In this case an injection that would increase the pH to the 6-8 range is desirable.	This process is not substantially limited by implementation. Bench testing and pilot testing can be used to optimize implementation.	This process has the potential to alter conditions rapidly but requires ongoing monitoring to ensure conditions remain favorable.	Non-hazardous chemicals used for pH adjustment will not create undesirable byproducts. High pH conditions (> 10) must be avoided due to increased solubility of beryllium at higher pH levels.	This process will likely have overall reliability in achieving GWPS goals when adequate volume and subsurface distribution are achieved. Ongoing monitoring is necessary to ensure favorable conditions are maintained once achieved.
Hydraulic Containment (Pump and Treat)	Combines a groundwater extraction system with a surface treatment system to remove target analytes from the subsurface and/or to control/prevent constituent migration.	Relative ease in implementation compared to other technologies.	Groundwater Pump & Treat is an effective corrective measure for dissolved constituents provided regular maintenance is performed throughout the operational life. Not typically immediately effective for trace level metals. Rebounding can occur as water levels return to normal once the pumping system is turned off post-remediation. Generally, requires disposal of treated water and sludges.	Groundwater Pump & Treat is more effective with constituents that are easily oxidized (low boiling point) and less effective with inorganic compounds (metals).	This technology provides moderate reliability by hydraulically controlling migration of the beryllium groundwater plume.
In-Situ Stabilization/Solidification	In situ stabilization is achieved by creating reactive zones in the subsurface through chemical injection to intercept constituents and permanently immobilize or degrade them into harmless end products. In-situ solidification is the process by which constituent mobility in a solid matrix is decreased through physical and/or chemical means. Grout or other chemical additives are mixed with aquifer materials to reduce permeability. The resulting lower aquifer permeability limits the flow of impacted groundwater.	Relative ease in implementation compared to other technologies; however, stabilization is likely not suitable due to high percentage of fine-grained materials in aquifer.	Performance would need to be assessed through pilot testing. May need to be used in conjunction with an additional technology. This treatment may reduce the permeability of the aquifer with precipitation of beryllium hydroxides.	Treatment may result in the stabilization of beryllium, however, increases in the solubility of non-target metals need to be considered. Can result in undesirably high pH levels if geochemical buffering system is not maintained.	The reliability of this technology is limited by the ability to distribute media used to solidify/stabilize in heterogeneous porous media. Fine-grained materials limit viability of stabilization.
Monitored Natural Attenuation	A remedial solution that takes advantage of natural attenuation processes to attenuate constituents in soil and groundwater. This option can meet the GWPS given sufficient time and favorable conditions.	This process is not limited by implementation.	This process provides ongoing effectiveness and is well documented as an effective measure for remediating groundwater	This process is effective in reducing toxicity, mobility, and concentrations of beryllium via natural processes.	This process will likely have overall reliability in achieving GWPS goals where impacted area remains internal to the site and is adequately monitored.
Permeable Reactive Barrier	A permeable reactive barrier is a zone of reactive material that extends below the water table to intercept and treat groundwater.	Depth to bedrock may make this technology challenging to implement.	This technology may have a limited reactive lifespan and is only effective for specific constituents. Marginally effective over long periods of time without replacement of PRB material. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier.	This technology may reduce the toxicity, mobility or volume of metals in groundwater through precipitation of the metal(s) as oxides in the reactive media.	This technology may not provide reliability in the site-specific lithology due to difficulty in interception groundwater flow though fractured bedrock.
Phytoremediation	Phytoremediation is the use of plants to remove, transfer or stabilize constituents in soil or groundwater. This technology can meet the GWPS for low level metal concentrations present in shallow groundwater.	The depth of the treatment zone is limited with this technology.	May be directly effective by hyperaccumulation of some metals, however phytoaccumulation is directly related to the plant species. Beryllium may need to be addressed by a method that does not involve direct uptake of impacted groundwater (i.e. traditional phytoremediation). An alternative method such as a TreeWell® system may need to be considered.	This technology is expected to marginally reduce the mobility or volume of inorganic constituents with the uptake of beryllium in the root system of the plant. Alternatively, plant root systems may be used to alter flow hydraulics and direct groundwater through a treatment media.	The presence of impacted groundwater below typical root zones and the lack of a readily identified beryllium hyperaccumulating plant species would need to be addressed for phytoremediation to be a reliable technology.
Subsurface Vertical Barrier Walls	Used to physically control the migration of impacted groundwater. They may be used to either directly contain impacted groundwater by isolating it or to manipulate the flow direction of groundwater.	Ideally the lower depth would achieve a low permeability zone. This may not be viable given the relatively deeply fractured nature of bedrock at the facility.	May need to be used in conjunction with an additional technology such as a permeable reactive barrier or pump-and-treat.	Potential mounding of groundwater, creating possible changes in flow direction or daylighting of seepage.	The reliability of this technology is limited by the ability to manage changes in the flow direction and hydraulic head of groundwater.

Table 2
Remedy Evaluation Summary
Plant Yates AP-3/A/B/B'

Corrective Measure	Begin/Complete	Institutional Requirements	Other Env or Public Health Requirements	Relative Costs
	40 CFR 257.96(c)(2)	**40 CFR 257.96(c)(3)**	**40 CFR 257.96(c)(3)**	
Geochemical Manipulation (In Situ Injection)	Can begin immediately upon completion of pilot testing and/or bench scale testing, which may take up to 24 months. Long-term monitoring and reporting likely required.	Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently appear to be no potential receptors downgradient of the units. Following installation, the remedy is passive.	Moderate costs are associated with this technology.
Hydraulic Containment (Pump and Treat)	Time needed to model and design may take up to 24 months; variable time for construction depending on scale, generally can be accomplished in 6 months.	Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required if groundwater conditions are above regulatory standards for unrestricted use.	Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the units. Above-ground treatment components may need to be present for an extended period, and generating residuals requiring management and disposal.	High costs are associated with this technology (O&M and groundwater disposal).
In-Situ Stabilization/Solidification	Time needed to model and design may take up to 24 months; variable time for construction depending on scale, generally can be accomplished relatively quickly between 6 and 12 months. Solidification is likely not suitable due to high percentage of fine-grained materials in aquifer.	Deed restrictions may be necessary for groundwater areas downgradient of the stabilized and/or solidified areas. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently appear to be no potential receptors downgradient of the unit. Following implementation of ISS, this source control remedy is passive, does not create carbon emissions, and preserves groundwater resources.	Moderate costs are associated with this technology (repeat injections if there is a rebound in concentrations).
Monitored Natural Attenuation	Can begin immediately. Long-term monitoring and reporting likely required.	MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the units.	Relatively lower capital costs are associated with this technology.
Permeable Reactive Barrier	Time needed to model and design may take up to 24 months; variable time for construction depending on scale, generally can be accomplished in 6 to 12 months.	Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the unit. Following installation, the remedy is passive. However, certain treatment media have the potential to mobilize naturally occurring constituents downgradient of the PRB.	High capital costs are associated with this technology.
Phytoremediation	Time needed to model and design may take up to 6 months. Pilot testing may be required, which could take up to three years. Depending on the number of required units, the installation effort is expected to last several weeks. Full hydraulic capture/control is expected approximately three years after planting.	Deed restrictions may be necessary for groundwater areas upgradient of the phytoremediation area or *TreeWell®* system. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the units. Innovative and green technology may be positively received by various stakeholders. Following installation, the remedy is passive and does not require external energy.	Relatively lower costs are associated with this technology. May require periodic harvesting and disposal of plant species.
Subsurface Vertical Barrier Walls	Time needed to model and design may take up to 24 months. Variable time for construction depending on scale, generally can be accomplished relatively quickly between 6 and 12 months.	Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.	Based on downgradient sampling results near adjacent waterbodies, there currently appears to be no potential receptors downgradient of the unit. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period, creating carbon emissions and generating residuals requiring management and disposal	High capital costs are associated with this technology.

Table 3
Summary of Recent Activity
Plant Yates AP-3/A/B/B'

Remedial Alternative	Data Collected/Actions Completed	Locations Sampled	Applicability & Rationale	Comments/Planned Actions
Geochemical Manipulation (In-Situ Injection)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. treatability studies).	Collect and analyze aquifer solids for similar analytes as groundwater and perform XRD analysis for mineralogy. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Identify suitable methods for increasing pH and alkalinity levels. Evaluate ways to chemically reduce elevated levels of sulfate. Bench-scale testing of impacted groundwater to determine quantity of reagent needed to raise pH levels to background levels and attenuate beryllium and cobalt in groundwater by fixation onto aquifer solids Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability.
Hydraulic Containment (Pump and Treat)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities. Collected data to evaluate groundwater parameter concentrations relative to NPDES limits and wastewater treatment capabilities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of ongoing dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. water treatment studies).	Collect and analyze groundwater samples for additional analytes applicable to discharge criteria. Perform additional aquifer testing to evaluate hydraulic characteristics. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability.
In Situ Stabilization/Solidification (ISS)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. treatability studies for solidification media).	Availability of solidification media compatible with acidic conditions needs to be reviewed. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Method for controlling bypass through fractured bedrock should be reviewed. Perform additional aquifer testing to evaluate subsurface hydraulic characteristics. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability.
Monitored Natural Attenuation (MNA)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Geochemical conditions in the vicinity of YGWC-33S are unique at the site and limited in aerial extent. Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM.	Compile analytical and subsurface hydrogeologic data and determine if MNA is feasible. Multiple sampling events will be required to build adequate data set for determining attenuation mechanism trends. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability. Evaluate sampling results and identify attenuation process occurring at the site
Permeable Reactive Barrier	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. suitable PRB media). Media that would facilitate sulfate reduction may be desirable	Evaluate available trenching technologies to determine viability. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Assess the durability of potential reactive media (i.e. replacement frequency). Consider performing testing (e.g. hydraulic conductivity) to evaluate aquifer characteristics. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability

Table 3
Summary of Recent Activity
Plant Yates AP-3/A/B/B'

Remedial Alternative	Data Collected/Actions Completed	Locations Sampled	Applicability & Rationale	Comments/Planned Actions
Phytoremediation	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Climate-compatible plants suitable for hyperaccumulation of beryllium have not been identified; there may be options for cobalt. An indirect TreeWell® type system that draws impacted water to the root zone through treatment media identified as possibly applicable in ACM.	Based on a preliminary desktop study there are no native or climate-compatible plants capable of treating both of the constituents of concern at the site. Continue to conduct supplementary groundwater sampling events to evaluate seasonal fluctuations in groundwater chemistry and plant nutrient levels. Continue to monitor groundwater elevation changes associated with dewatering and closure activities.
Subsurface Vertical Barrier Walls	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities Collected geochemical data to evaluate groundwater parameter concentrations relative to NPDES limits and wastewater treatment capabilities (i.e., as with pump and treat redirected groundwater would potentially need to be treated).	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. suitability of material with subsurface conditions, water treatment studies). Material would need to be resistant to acidic conditions present in the vicinity of YGWC-33S. Typical wall material (e.g. bentonite slurry) not acid resistant.	Additional literature review of recommended barrier wall formulation and installation technique if barrier walls are used. Further evaluate the suitability of the site geology (fractured bedrock) for a barrier wall. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Mounding of groundwater upgradient from the barrier wall would need to be addressed by dewatering. Dewatering would need to be compatible with NPDES permit requirements. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability Perform additional aquifer testing to evaluate hydraulic characteristics.

Table 4
Summary of Analytical Data
Plant Yates AP-3/A/B/B'

Substance	YGWA-4I	YGWA-5I	YGWA-5D	YGWA-17S	YGWA-18S	YGWA-18I	YGWA-20S	YGWA-21I	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36	YGWC-49	PZ-35	YAMW-1
	10/10/2019	10/10/2019	10/10/2019	10/10/2019	9/26/2019	9/26/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	9/26/2019	10/10/2019	10/10/2019	9/26/2019	9/26/2019
Aluminum	ND	ND (0.062 J)	ND	ND (0.040 J)	ND (0.0648 J)	ND (0.050 J)	ND (0.065 J)	ND	ND (0.078 J)	ND	3.82	ND	ND	ND	ND
Calcium	9.9	2.4	24.2	2.4	1.07	5.25	2.6	5.6	3.6	1.7	127	12.2	12.6	4.83	10.2
Iron	ND	0.056	0.16	ND (0.026 J)	ND (0.0207 J)	0.0519	ND (0.035 J)	1.6	0.080	ND	0.495	ND (0.028 J)	0.088	ND	0.0967
Iron, Ferric	ND	ND	ND	ND	ND	ND	ND	0.60	ND	ND	0.50	ND	ND	ND	ND
Iron, Ferrous	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magnesium	5.7	2.5	4.3	0.85	1.25	3.0	0.62	3.3	3.1	1.3	52.4	7.4	8.9	2.57	6.13
Manganese	ND (0.0089 J)	ND	0.52	ND (0.0085 J)	0.0122	0.0188	ND	0.34	ND	ND	12.8	0.062	ND (0.0076 J)	0.0164	0.410
Potassium	4.1	1.5	3.5	0.38	ND	ND (1.01 J)	0.59	2.9	0.72	0.61	ND (3.58 J)	1.9	1.9	ND (1.02 J)	23.3
Sodium	9.5	9.8	8.5	11.7	8.24	12.5	8.3	17.1	7.0	7.9	16.9	18.2	17.2	10.7	20.2
Alkalinity, Total (as $CaCO_3$)	64.0	26.0	95.0	16.0	7.0	33.0	22.0	62.0	7.0	13.0	ND	12.0	14.2	13.5	53.0
Alkalinity, Bicarbonate (as $CaCO_3$)	64.0	26.0	95.0	16.0	7.0	33.0	22.0	62.0	7.0	13.0	ND	12.0	14.2	13.5	53.0
Alkalinity, Carbonate (as $CaCO_3$)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Orthophosphate (as P)	ND	ND	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as N)	0.72	1.6	ND (0.010 J)	1.6	1.7	2.5	0.76	ND (0.048 J)	0.081	1.5	ND	1.6	1.1	2.1	0.66
Chloride	5.0	1.6	4.3	5.8	7.2	7.0	3.7	3.3	2.0	6.8	3.9	ND	5.3	7.5	6.4
Fluoride	ND (0.13 J)	1.1	ND (0.16 J)	ND	ND	ND	ND (0.099 J)	ND (0.11 J)	ND (0.11 J)	ND (0.030 J)	0.33	ND	ND (0.090 J)	ND	ND
Sulfate	9.2	1.8	ND	5.5	1.5	ND (0.78 J)	ND (0.058 J)	3.6	29.5	ND (0.21 J)	601	ND	79.5	14.3	46.6
Total Organic Carbon	ND (0.55 J)	ND	ND (0.62 J)	ND (0.62 J)	ND (0.55 J)	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND

Substance	YGWA-39	YGWA-40	YGWC-38	YGWC-41	YGWC-42	YGWC-43
	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019
Aluminum	ND	ND	ND (0.068 J)	ND (0.048 J)	ND (0.047 J)	ND
Calcium	2.4	5.2	147	30.9	103	21.9
Iron	1.4	ND	ND	ND	0.35	26.0
Iron, Ferric	1.4	ND	ND	ND	0.35	26.0
Iron, Ferrous	1.5	0.0	0.0	0.3	0.0	3.0
Magnesium	3.0	2.9	73.2	36.4	110	43.0
Manganese	0.22	ND	0.11	0.073	0.12	1.7
Potassium	3.2	2.0	6.1	3.5	11.7	8.1
Sodium	11.9	7.9	24.3	20.5	28.8	20.7
Alkalinity, Total (as $CaCO_3$)	35.0	9.5	8.5	4.5	36.0	42.0
Alkalinity, Bicarbonate (as $CaCO_3$)	35.0	9.5	8.5	4.5	36.0	42.0
Alkalinity, Carbonate (as $CaCO_3$)	ND	ND	ND	ND	ND	ND
Orthophosphate (as P)	ND	ND	ND	ND	ND	ND
Sulfide	ND	ND	ND	ND	ND	ND
Nitrate (as N)	ND (0.013 J)	ND (0.026 J)	1.0	0.50	0.32	ND (0.011 J)
Chloride	2.0	5.0	4.8	3.3	4.3	2.4
Fluoride	ND	ND	ND	ND	ND	ND
Sulfate	14.7	27.6	692	256	732	279
Total Organic Carbon	4.1	ND	ND	ND	ND	ND

Notes:
1. Results for substances are reported in milligrams per liter (mg/L).
2. ND (Not Detected) indicates the substance was not detected above the laboratory method detection limit (MDL).
3. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.

TABLES

Atlantic Coast Consulting, Inc.

Table 1
Appendix IV Statistically Significant Levels
Plant Yates AP-3/A/B/B'

Constituent	Well	Upper Confidence Limit	Lower Confidence Limit	MCL
Beryllium	YGWC-33S	0.019	0.014	0.004
Cobalt	YGWC-33S	0.027	0.014	0.013*

Notes:

1. Units are milligrams per liter
2. MCL = maximum contaminant level
3. * No MCL established for cobalt; site background is referenced.
4. Data are from 2019 Groundwater Monitoring and Corrective Action Report.

Table 2
Remedy Evaluation Summary
Plant Yates AP-3/A/B/B'

Corrective Measure	Description	Ease of Implementation	Performance	Potential Impacts	Reliability
		40 CFR 257.96(c)(1)	40 CFR 257.96(c)(1)	40 CFR 257.96(c)(1)	40 CFR 257.96(c)(1)
Geochemical Manipulation (In Situ Injection)	Injection of a chemical or organic substrate to alter geochemical conditions to those more favorable for stabilization of beryllium. In this case an injection that would increase the pH to the 6-8 range is desirable.	This process is not substantially limited by implementation. Bench testing and pilot testing can be used to optimize implementation.	This process has the potential to alter conditions rapidly but requires ongoing monitoring to ensure conditions remain favorable.	Non-hazardous chemicals used for pH adjustment will not create undesirable byproducts. High pH conditions (> 10) must be avoided due to increased solubility of beryllium at higher pH levels.	This process will likely have overall reliability in achieving GWPS goals when adequate volume and subsurface distribution are achieved. Ongoing monitoring is necessary to ensure favorable conditions are maintained once achieved.
Hydraulic Containment (Pump and Treat)	Combines a groundwater extraction system with a surface treatment system to remove target analytes from the subsurface and/or to control/prevent constituent migration.	Relative ease in implementation compared to other technologies.	Groundwater Pump & Treat is an effective corrective measure for dissolved constituents provided regular maintenance is performed throughout the operational life. Not typically immediately effective for trace level metals. Rebounding can occur as water levels return to normal once the pumping system is turned off post-remediation. Generally, requires disposal of treated water and sludges.	Groundwater Pump & Treat is more effective with constituents that are easily oxidized (low boiling point) and less effective with inorganic compounds (metals).	This technology provides moderate reliability by hydraulically controlling migration of the beryllium groundwater plume.
In-Situ Stabilization/Solidification	In situ stabilization is achieved by creating reactive zones in the subsurface through chemical injection to intercept constituents and permanently immobilize or degrade them into harmless end products. In-situ solidification is the process by which constituent mobility in a solid matrix is decreased through physical and/or chemical means. Grout or other chemical additives are mixed with aquifer materials to reduce permeability. The resulting lower aquifer permeability limits the flow of impacted groundwater.	Relative ease in implementation compared to other technologies; however, stabilization is likely not suitable due to high percentage of fine-grained materials in aquifer.	Performance would need to be assessed through pilot testing. May need to be used in conjunction with an additional technology. This treatment may reduce the permeability of the aquifer with precipitation of beryllium hydroxides.	Treatment may result in the stabilization of beryllium, however, increases in the solubility of non-target metals need to be considered. Can result in undesirably high pH levels if geochemical buffering system is not maintained.	The reliability of this technology is limited by the ability to distribute media used to solidify/stabilize in heterogeneous porous media. Fine-grained materials limit viability of stabilization.
Monitored Natural Attenuation	A remedial solution that takes advantage of natural attenuation processes to attenuate constituents in soil and groundwater. This option can meet the GWPS given sufficient time and favorable conditions.	This process is not limited by implementation.	This process provides ongoing effectiveness and is well documented as an effective measure for remediating groundwater	This process is effective in reducing toxicity, mobility, and concentrations of beryllium via natural processes.	This process will likely have overall reliability in achieving GWPS goals where impacted area remains internal to the site and is adequately monitored.
Permeable Reactive Barrier	A permeable reactive barrier is a zone of reactive material that extends below the water table to intercept and treat groundwater.	Depth to bedrock may make this technology challenging to implement.	This technology may have a limited reactive lifespan and is only effective for specific constituents. Marginally effective over long periods of time without replacement of PRB material. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier.	This technology may reduce the toxicity, mobility or volume of metals in groundwater through precipitation of the metal(s) as oxides in the reactive media.	This technology may not provide reliability in the site-specific lithology due to difficulty in interception groundwater flow though fractured bedrock.
Phytoremediation	Phytoremediation is the use of plants to remove, transfer or stabilize constituents in soil or groundwater. This technology can meet the GWPS for low level metal concentrations present in shallow groundwater.	The depth of the treatment zone is limited with this technology.	May be directly effective by hyperaccumulation of some metals, however phytoaccumulation is directly related to the plant species. Beryllium may need to be addressed by a method that does not involve direct uptake of impacted groundwater (i.e. traditional phytoremediation). An alternative method such as a TreeWell® system may need to be considered.	This technology is expected to marginally reduce the mobility or volume of inorganic constituents with the uptake of beryllium in the root system of the plant. Alternatively, plant root systems may be used to alter flow hydraulics and direct groundwater through a treatment media.	The presence of impacted groundwater below typical root zones and the lack of a readily identified beryllium hyperaccumulating plant species would need to be addressed for phytoremediation to be a reliable technology.
Subsurface Vertical Barrier Walls	Used to physically control the migration of impacted groundwater. They may be used to either directly contain impacted groundwater by isolating it or to manipulate the flow direction of groundwater.	Ideally the lower depth would achieve a low permeability zone. This may not be viable given the relatively deeply fractured nature of bedrock at the facility.	May need to be used in conjunction with an additional technology such as a permeable reactive barrier or pump-and-treat.	Potential mounding of groundwater, creating possible changes in flow direction or daylighting of seepage.	The reliability of this technology is limited by the ability to manage changes in the flow direction and hydraulic head of groundwater.

Table 2
Remedy Evaluation Summary
Plant Yates AP-3/A/B/B'

Corrective Measure	Begin/Complete	Institutional Requirements	Other Env or Public Health Requirements	Relative Costs
	40 CFR 257.96(c)(2)	**40 CFR 257.96(c)(3)**	**40 CFR 257.96(c)(3)**	
Geochemical Manipulation (In Situ Injection)	Can begin immediately upon completion of pilot testing and/or bench scale testing, which may take up to 24 months. Long-term monitoring and reporting likely required.	Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently appear to be no potential receptors downgradient of the units. Following installation, the remedy is passive.	Moderate costs are associated with this technology.
Hydraulic Containment (Pump and Treat)	Time needed to model and design may take up to 24 months; variable time for construction depending on scale, generally can be accomplished in 6 months.	Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required if groundwater conditions are above regulatory standards for unrestricted use.	Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the units. Above-ground treatment components may need to be present for an extended period, and generating residuals requiring management and disposal.	High costs are associated with this technology (O&M and groundwater disposal).
In-Situ Stabilization/Solidification	Time needed to model and design may take up to 24 months; variable time for construction depending on scale, generally can be accomplished relatively quickly between 6 and 12 months. Solidification is likely not suitable due to high percentage of fine-grained materials in aquifer.	Deed restrictions may be necessary for groundwater areas downgradient of the stabilized and/or solidified areas. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently appear to be no potential receptors downgradient of the unit. Following implementation of ISS, this source control remedy is passive, does not create carbon emissions, and preserves groundwater resources.	Moderate costs are associated with this technology (repeat injections if there is a rebound in concentrations).
Monitored Natural Attenuation	Can begin immediately. Long-term monitoring and reporting likely required.	MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the units.	Relatively lower capital costs are associated with this technology.
Permeable Reactive Barrier	Time needed to model and design may take up to 24 months; variable time for construction depending on scale, generally can be accomplished in 6 to 12 months.	Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the unit. Following installation, the remedy is passive. However, certain treatment media have the potential to mobilize naturally occurring constituents downgradient of the PRB.	High capital costs are associated with this technology.
Phytoremediation	Time needed to model and design may take up to 6 months. Pilot testing may be required, which could take up to three years. Depending on the number of required units, the installation effort is expected to last several weeks. Full hydraulic capture/control is expected approximately three years after planting.	Deed restrictions may be necessary for groundwater areas upgradient of the phytoremediation area or *TreeWell®* system. No other institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results near adjacent waterbodies, there currently are no complete receptor pathways downgradient of the units. Innovative and green technology may be positively received by various stakeholders. Following installation, the remedy is passive and does not require external energy.	Relatively lower costs are associated with this technology. May require periodic harvesting and disposal of plant species.
Subsurface Vertical Barrier Walls	Time needed to model and design may take up to 24 months. Variable time for construction depending on scale, generally can be accomplished relatively quickly between 6 and 12 months.	Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.	Based on downgradient sampling results near adjacent waterbodies, there currently appears to be no potential receptors downgradient of the unit. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period, creating carbon emissions and generating residuals requiring management and disposal	High capital costs are associated with this technology.

Table 3
Summary of Recent Activity
Plant Yates AP-3/A/B/B'

Remedial Alternative	Data Collected/Actions Completed	Locations Sampled	Applicability & Rationale	Comments/Planned Actions
Geochemical Manipulation (In-Situ Injection)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. treatability studies).	Collect and analyze aquifer solids for similar analytes as groundwater and perform XRD analysis for mineralogy. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Identify suitable methods for increasing pH and alkalinity levels. Evaluate ways to chemically reduce elevated levels of sulfate. Bench-scale testing of impacted groundwater to determine quantity of reagent needed to raise pH levels to background levels and attenuate beryllium and cobalt in groundwater by fixation onto aquifer solids Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability.
Hydraulic Containment (Pump and Treat)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities. Collected data to evaluate groundwater parameter concentrations relative to NPDES limits and wastewater treatment capabilities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of ongoing dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. water treatment studies).	Collect and analyze groundwater samples for additional analytes applicable to discharge criteria. Perform additional aquifer testing to evaluate hydraulic characteristics. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability.
In Situ Stabilization/Solidification (ISS)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. treatability studies for solidification media).	Availability of solidification media compatible with acidic conditions needs to be reviewed. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Method for controlling bypass through fractured bedrock should be reviewed. Perform additional aquifer testing to evaluate subsurface hydraulic characteristics. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability.
Monitored Natural Attenuation (MNA)	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Geochemical conditions in the vicinity of YGWC-33S are unique at the site and limited in aerial extent. Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM.	Compile analytical and subsurface hydrogeologic data and determine if MNA is feasible. Multiple sampling events will be required to build adequate data set for determining attenuation mechanism trends. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability. Evaluate sampling results and identify attenuation process occurring at the site
Permeable Reactive Barrier	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. suitable PRB media). Media that would facilitate sulfate reduction may be desirable	Evaluate available trenching technologies to determine viability. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Assess the durability of potential reactive media (i.e. replacement frequency). Consider performing testing (e.g. hydraulic conductivity) to evaluate aquifer characteristics. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability

Table 3
Summary of Recent Activity
Plant Yates AP-3/A/B/B'

Remedial Alternative	Data Collected/Actions Completed	Locations Sampled	Applicability & Rationale	Comments/Planned Actions
Phytoremediation	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities.	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Climate-compatible plants suitable for hyperaccumulation of beryllium have not been identified; there may be options for cobalt. An indirect TreeWell® type system that draws impacted water to the root zone through treatment media identified as possibly applicable in ACM.	Based on a preliminary desktop study there are no native or climate-compatible plants capable of treating both of the constituents of concern at the site. Continue to conduct supplementary groundwater sampling events to evaluate seasonal fluctuations in groundwater chemistry and plant nutrient levels. Continue to monitor groundwater elevation changes associated with dewatering and closure activities.
Subsurface Vertical Barrier Walls	Collected a comprehensive suite of geochemical analytes, including: cations (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium), anions (bicarbonate, carbonate, chloride, fluoride, nitrate, sulfate, and sulfide), ortho phosphorus, sulfide, ferrous/ferric iron, and TOC, to evaluate occurrence and distribution of target chemical constituents in groundwater and to evaluate attenuation mechanisms in the aquifer. Reviewed preliminary data for potential source of acidity (e.g. iron sulfide versus aluminum sulfate), progress towards understanding potential chemical treatment options. Continuous water level monitoring with data loggers in selected wells to evaluate subsurface dynamics related to closure activities Collected geochemical data to evaluate groundwater parameter concentrations relative to NPDES limits and wastewater treatment capabilities (i.e., as with pump and treat redirected groundwater would potentially need to be treated).	AP-3, A, B, and B': YGWA-4I, YGWA-5I, YGWA-5D, YGWA-17S, YGWA-18S, YGWA-18I, YGWA-20S, YGWA-21I, YGWC-23S, YGWC-24S, YGWC-33S, YGWC-36, PZ-35, and YAMW-1 R6 CCR Landfill: YGWA-39, YGWA-40, YGWC-38, YGWC-41, YGWC-42, and YGWC-43	Obtain a baseline of current geochemical conditions. Observe the effects of dewatering activities. Further assess correlation between declining water level and lowering of pH observed during preparation of ACM. Data may be used to develop bench-scale testing plan (i.e. suitability of material with subsurface conditions, water treatment studies). Material would need to be resistant to acidic conditions present in the vicinity of YGWC-33S. Typical wall material (e.g. bentonite slurry) not acid resistant.	Additional literature review of recommended barrier wall formulation and installation technique if barrier walls are used. Further evaluate the suitability of the site geology (fractured bedrock) for a barrier wall. Assess the lateral extent of low pH groundwater in the vicinity of YGWC-33S. Refine the extent of the potential attenuation area. Mounding of groundwater upgradient from the barrier wall would need to be addressed by dewatering. Dewatering would need to be compatible with NPDES permit requirements. Collect and analyze aquifer solids by sequential extraction procedure for evaluation of aquifer attenuation capacity for beryllium and cobalt and assess constituent mobility and stability Perform additional aquifer testing to evaluate hydraulic characteristics.

Table 4
Summary of Analytical Data
Plant Yates AP-3/A/B/B'

Substance	YGWA-4I	YGWA-5I	YGWA-5D	YGWA-17S	YGWA-18S	YGWA-18I	YGWA-20S	YGWA-21I	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36	YGWC-49	PZ-35	YAMW-1
	10/10/2019	10/10/2019	10/10/2019	10/10/2019	9/26/2019	9/26/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	9/26/2019	10/10/2019	10/10/2019	9/26/2019	9/26/2019
Aluminum	ND	ND (0.062 J)	ND	ND (0.040 J)	ND (0.0648 J)	ND (0.050 J)	ND (0.065 J)	ND	ND (0.078 J)	ND	3.82	ND	ND	ND	ND
Calcium	9.9	2.4	24.2	2.4	1.07	5.25	2.6	5.6	3.6	1.7	127	12.2	12.6	4.83	10.2
Iron	ND	0.056	0.16	ND (0.026 J)	ND (0.0207 J)	0.0519	ND (0.035 J)	1.6	0.080	ND	0.495	ND (0.028 J)	0.088	ND	0.0967
Iron, Ferric	ND	ND	ND	ND	ND	ND	ND	0.60	ND	ND	0.50	ND	ND	ND	ND
Iron, Ferrous	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Magnesium	5.7	2.5	4.3	0.85	1.25	3.0	0.62	3.3	3.1	1.3	52.4	7.4	8.9	2.57	6.13
Manganese	ND (0.0089 J)	ND	0.52	ND (0.0085 J)	0.0122	0.0188	ND	0.34	ND	ND	12.8	0.062	ND (0.0076 J)	0.0164	0.410
Potassium	4.1	1.5	3.5	0.38	ND	ND (1.01 J)	0.59	2.9	0.72	0.61	ND (3.58 J)	1.9	1.9	ND (1.02 J)	23.3
Sodium	9.5	9.8	8.5	11.7	8.24	12.5	8.3	17.1	7.0	7.9	16.9	18.2	17.2	10.7	20.2
Alkalinity, Total (as $CaCO_3$)	64.0	26.0	95.0	16.0	7.0	33.0	22.0	62.0	7.0	13.0	ND	12.0	14.2	13.5	53.0
Alkalinity, Bicarbonate (as $CaCO_3$)	64.0	26.0	95.0	16.0	7.0	33.0	22.0	62.0	7.0	13.0	ND	12.0	14.2	13.5	53.0
Alkalinity, Carbonate (as $CaCO_3$)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Orthophosphate (as P)	ND	ND	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as N)	0.72	1.6	ND (0.010 J)	1.6	1.7	2.5	0.76	ND (0.048 J)	0.081	1.5	ND	1.6	1.1	2.1	0.66
Chloride	5.0	1.6	4.3	5.8	7.2	7.0	3.7	3.3	2.0	6.8	3.9	ND	5.3	7.5	6.4
Fluoride	ND (0.13 J)	1.1	ND (0.16 J)	ND	ND	ND	ND (0.099 J)	ND (0.11 J)	ND (0.11 J)	ND (0.030 J)	0.33	ND	ND (0.090 J)	ND	ND
Sulfate	9.2	1.8	ND	5.5	1.5	ND (0.78 J)	ND (0.058 J)	3.6	29.5	ND (0.21 J)	601	ND	79.5	14.3	46.6
Total Organic Carbon	ND (0.55 J)	ND	ND (0.62 J)	ND (0.62 J)	ND (0.55 J)	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND

Substance	YGWA-39	YGWA-40	YGWC-38	YGWC-41	YGWC-42	YGWC-43
	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019	10/9/2019
Aluminum	ND	ND	ND (0.068 J)	ND (0.048 J)	ND (0.047 J)	ND
Calcium	2.4	5.2	147	30.9	103	21.9
Iron	1.4	ND	ND	ND	0.35	26.0
Iron, Ferric	1.4	ND	ND	ND	0.35	26.0
Iron, Ferrous	1.5	0.0	0.0	0.3	0.0	3.0
Magnesium	3.0	2.9	73.2	36.4	110	43.0
Manganese	0.22	ND	0.11	0.073	0.12	1.7
Potassium	3.2	2.0	6.1	3.5	11.7	8.1
Sodium	11.9	7.9	24.3	20.5	28.8	20.7
Alkalinity, Total (as $CaCO_3$)	35.0	9.5	8.5	4.5	36.0	42.0
Alkalinity, Bicarbonate (as $CaCO_3$)	35.0	9.5	8.5	4.5	36.0	42.0
Alkalinity, Carbonate (as $CaCO_3$)	ND	ND	ND	ND	ND	ND
Orthophosphate (as P)	ND	ND	ND	ND	ND	ND
Sulfide	ND	ND	ND	ND	ND	ND
Nitrate (as N)	ND (0.013 J)	ND (0.026 J)	1.0	0.50	0.32	ND (0.011 J)
Chloride	2.0	5.0	4.8	3.3	4.3	2.4
Fluoride	ND	ND	ND	ND	ND	ND
Sulfate	14.7	27.6	692	256	732	279
Total Organic Carbon	4.1	ND	ND	ND	ND	ND

Notes:
1. Results for substances are reported in milligrams per liter (mg/L).
2. ND (Not Detected) indicates the substance was not detected above the laboratory method detection limit (MDL).
3. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instrument could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated value.

FIGURE 1 – WELL LOCATION MAP

ATLANTIC COAST CONSULTING, INC.
1150 Northmeadow Pkwy.
Suite 100
Roswell, GA 30076
o 770.594.5998
www.atlcc.net

PROJECT:

PLANT YATES

708 DYER ROAD
NEWNAN, GEORGIA

REVISIONS

Drawn by: MM

Checked by: EP

PROJECT NUMBER:

I054-110

January 2020

WELL LOCATION MAP

FIGURE 1

APPENDIX A – LABORATORY ANALYTICAL REPORTS AND FIELD SAMPLING DATA

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 06, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates AP Additional
Pace Project No.: 2623614

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised Report: Report revised to add metals analysis

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2623614001	**YGWA-18S**	Water	09/26/19 10:45	09/26/19 15:15
2623614002	**YGWA-18I**	Water	09/26/19 12:30	09/26/19 15:15
2623614003	**YAMW-1**	Water	09/26/19 10:05	09/26/19 15:15
2623614004	**PZ-35**	Water	09/26/19 11:00	09/26/19 15:15
2623614005	**YGWC-33S**	Water	09/26/19 10:50	09/26/19 15:15

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2623614001	**YGWA-18S**	EPA 6010D	DS	7	PASI-A
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		SM 5310B	SA1	1	PASI-O
2623614002	**YGWA-18I**	EPA 6010D	DS	7	PASI-A
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		SM 5310B	SA1	1	PASI-O
2623614003	**YAMW-1**	EPA 6010D	DS	7	PASI-A
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		SM 5310B	SA1	1	PASI-O
2623614004	**PZ-35**	EPA 6010D	DS	7	PASI-A
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		SM 5310B	SA1	1	PASI-O
2623614005	**YGWC-33S**	EPA 6010D	DS, SH1	7	PASI-A
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA

Pace Analytical Services, LLC
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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		SM 5310B	SA1	1	PASI-O

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Sample: YGWA-18S **Lab ID: 2623614001** Collected: 09/26/19 10:45 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		09/26/19 10:45		
Iron, Ferrous	**0**	mg/L			1		09/26/19 10:45		
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**64.8J**	ug/L	100	29.8	1	10/06/19 10:41	10/07/19 15:56	7429-90-5	
Calcium	**1070**	ug/L	100	24.2	1	10/06/19 10:41	10/07/19 15:56	7440-70-2	
Iron	**20.7J**	ug/L	50.0	19.5	1	10/06/19 10:41	10/07/19 15:56	7439-89-6	
Magnesium	**1250**	ug/L	100	17.1	1	10/06/19 10:41	10/07/19 15:56	7439-95-4	
Manganese	**12.2**	ug/L	5.0	0.90	1	10/06/19 10:41	10/07/19 15:56	7439-96-5	
Potassium	ND	ug/L	5000	890	1	10/06/19 10:41	10/07/19 15:56	7440-09-7	
Sodium	**8240**	ug/L	5000	174	1	10/06/19 10:41	10/07/19 15:56	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**7.0**	mg/L	1.0	1.0	1		10/02/19 13:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/02/19 13:03		
Alkalinity, Total as CaCO3	**7.0**	mg/L	1.0	1.0	1		10/02/19 13:03		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/03/19 00:50	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		09/27/19 11:16		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		09/30/19 16:07	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.7**	mg/L	0.050	0.0050	1		09/27/19 03:29	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.2**	mg/L	1.0	0.60	1		10/01/19 19:45	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 19:45	16984-48-8	
Sulfate	**1.5**	mg/L	1.0	0.50	1		10/01/19 19:45	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**0.55J**	mg/L	1.0	0.50	1		10/02/19 04:52	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Sample: YGWA-18I **Lab ID: 2623614002** Collected: 09/26/19 12:30 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		09/26/19 12:30		
Iron, Ferrous	**0**	mg/L			1		09/26/19 12:30		
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**50.0J**	ug/L	100	29.8	1	10/06/19 10:41	10/07/19 16:15	7429-90-5	
Calcium	**5250**	ug/L	100	24.2	1	10/06/19 10:41	10/07/19 16:15	7440-70-2	
Iron	**51.9**	ug/L	50.0	19.5	1	10/06/19 10:41	10/07/19 16:15	7439-89-6	
Magnesium	**3000**	ug/L	100	17.1	1	10/06/19 10:41	10/07/19 16:15	7439-95-4	
Manganese	**18.8**	ug/L	5.0	0.90	1	10/06/19 10:41	10/07/19 16:15	7439-96-5	
Potassium	**1010J**	ug/L	5000	890	1	10/06/19 10:41	10/07/19 16:15	7440-09-7	
Sodium	**12500**	ug/L	5000	174	1	10/06/19 10:41	10/07/19 16:15	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**33.0**	mg/L	20.0	20.0	1		09/30/19 17:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		09/30/19 17:40		
Alkalinity, Total as CaCO3	**33.0**	mg/L	20.0	20.0	1		09/30/19 17:40		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/03/19 00:50	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		09/27/19 11:19		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		09/30/19 16:08	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**2.5**	mg/L	0.050	0.0050	1		09/27/19 04:31	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.0**	mg/L	1.0	0.60	1		10/01/19 19:59	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 19:59	16984-48-8	
Sulfate	**0.78J**	mg/L	1.0	0.50	1		10/01/19 19:59	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/02/19 05:48	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Sample: YAMW-1 **Lab ID: 2623614003** Collected: 09/26/19 10:05 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		09/26/19 10:05		
Iron, Ferrous	**0**	mg/L			1		09/26/19 10:05		
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	ug/L	100	29.8	1	10/06/19 10:41	10/07/19 16:18	7429-90-5	
Calcium	**10200**	ug/L	100	24.2	1	10/06/19 10:41	10/07/19 16:18	7440-70-2	
Iron	**96.7**	ug/L	50.0	19.5	1	10/06/19 10:41	10/07/19 16:18	7439-89-6	
Magnesium	**6130**	ug/L	100	17.1	1	10/06/19 10:41	10/07/19 16:18	7439-95-4	
Manganese	**410**	ug/L	5.0	0.90	1	10/06/19 10:41	10/07/19 16:18	7439-96-5	
Potassium	**23300**	ug/L	5000	890	1	10/06/19 10:41	10/07/19 16:18	7440-09-7	
Sodium	**20200**	ug/L	5000	174	1	10/06/19 10:41	10/07/19 16:18	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**53.0**	mg/L	20.0	20.0	1		09/30/19 17:44		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		09/30/19 17:44		
Alkalinity, Total as CaCO3	**53.0**	mg/L	20.0	20.0	1		09/30/19 17:44		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/03/19 00:50	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		09/27/19 11:16		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		09/30/19 16:11	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.66**	mg/L	0.050	0.0050	1		09/27/19 02:27	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**6.4**	mg/L	1.0	0.60	1		10/01/19 20:43	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 20:43	16984-48-8	
Sulfate	**46.6**	mg/L	1.0	0.50	1		10/01/19 20:43	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/02/19 06:00	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Sample: PZ-35 **Lab ID: 2623614004** Collected: 09/26/19 11:00 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		09/26/19 11:00		
Iron, Ferrous	**0**	mg/L			1		09/26/19 11:00		
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	ug/L	100	29.8	1	10/06/19 10:41	10/07/19 16:21	7429-90-5	
Calcium	**4830**	ug/L	100	24.2	1	10/06/19 10:41	10/07/19 16:21	7440-70-2	
Iron	ND	ug/L	50.0	19.5	1	10/06/19 10:41	10/07/19 16:21	7439-89-6	
Magnesium	**2570**	ug/L	100	17.1	1	10/06/19 10:41	10/07/19 16:21	7439-95-4	
Manganese	**16.4**	ug/L	5.0	0.90	1	10/06/19 10:41	10/07/19 16:21	7439-96-5	
Potassium	**1020J**	ug/L	5000	890	1	10/06/19 10:41	10/07/19 16:21	7440-09-7	
Sodium	**10700**	ug/L	5000	174	1	10/06/19 10:41	10/07/19 16:21	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**13.5**	mg/L	1.0	1.0	1		10/02/19 13:08		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/02/19 13:08		
Alkalinity, Total as CaCO3	**13.5**	mg/L	1.0	1.0	1		10/02/19 13:08		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/03/19 00:50	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		09/27/19 11:18		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		09/30/19 17:39	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**2.1**	mg/L	0.050	0.0050	1		09/27/19 04:10	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**7.5**	mg/L	1.0	0.60	1		10/01/19 20:58	16887-00-6	
Fluoride	ND	mg/L	0.30	0.050	1		10/01/19 20:58	16984-48-8	
Sulfate	**14.3**	mg/L	1.0	0.50	1		10/01/19 20:58	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/02/19 07:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Sample: YGWC-33S **Lab ID: 2623614005** Collected: 09/26/19 10:50 Received: 09/26/19 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		09/26/19 10:50		
Iron, Ferrous	**0**	mg/L			1		09/26/19 10:50		
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**3820**	ug/L	100	29.8	1	10/06/19 10:41	10/07/19 16:24	7429-90-5	
Calcium	**127000**	ug/L	500	121	5	10/06/19 10:41	10/07/19 22:31	7440-70-2	
Iron	**495**	ug/L	50.0	19.5	1	10/06/19 10:41	10/07/19 16:24	7439-89-6	
Magnesium	**52400**	ug/L	100	17.1	1	10/06/19 10:41	10/07/19 16:24	7439-95-4	
Manganese	**12800**	ug/L	25.0	4.5	5	10/06/19 10:41	10/07/19 22:31	7439-96-5	
Potassium	**3580J**	ug/L	5000	890	1	10/06/19 10:41	10/07/19 16:24	7440-09-7	
Sodium	**16900**	ug/L	5000	174	1	10/06/19 10:41	10/07/19 16:24	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	20.0	20.0	1		09/30/19 17:48		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		09/30/19 17:48		
Alkalinity, Total as CaCO3	ND	mg/L	20.0	20.0	1		09/30/19 17:48		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	**0.50**	mg/L	0.20	0.20	1		10/03/19 00:50	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		09/27/19 11:18		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		09/30/19 17:41	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	ND	mg/L	0.050	0.0050	1		09/27/19 03:50	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
Chloride	**3.9**	mg/L	1.0	0.60	1		10/01/19 21:12	16887-00-6	
Fluoride	**0.33**	mg/L	0.30	0.050	1		10/01/19 21:12	16984-48-8	
Sulfate	**601**	mg/L	12.0	6.0	12		10/02/19 01:05	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/02/19 07:48	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 501963 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

METHOD BLANK: 2699171 Matrix: Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	29.8	10/07/19 15:50	
Calcium	ug/L	ND	100	24.2	10/07/19 15:50	
Iron	ug/L	ND	50.0	19.5	10/07/19 15:50	
Magnesium	ug/L	ND	100	17.1	10/07/19 15:50	
Manganese	ug/L	1.1J	5.0	0.90	10/07/19 15:50	
Potassium	ug/L	ND	5000	890	10/07/19 15:50	
Sodium	ug/L	ND	5000	174	10/07/19 15:50	

LABORATORY CONTROL SAMPLE: 2699172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4890	98	80-120	
Calcium	ug/L	5000	4940	99	80-120	
Iron	ug/L	5000	4920	98	80-120	
Magnesium	ug/L	5000	4920	98	80-120	
Manganese	ug/L	500	495	99	80-120	
Potassium	ug/L	5000	4890J	98	80-120	
Sodium	ug/L	5000	4980J	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2699173 2699174

Parameter	Units	2623614001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	64.8J	5000	5000	5040	5140	100	101	75-125	2	20	
Calcium	ug/L	1070	5000	5000	6020	6170	99	102	75-125	2	20	
Iron	ug/L	20.7J	5000	5000	4980	5100	99	102	75-125	2	20	
Magnesium	ug/L	1250	5000	5000	6180	6310	99	101	75-125	2	20	
Manganese	ug/L	12.2	500	500	505	514	98	100	75-125	2	20	
Potassium	ug/L	ND	5000	5000	5610	5740	100	103	75-125	2	20	
Sodium	ug/L	8240	5000	5000	13300	13500	100	106	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 36180 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 2623614002, 2623614003, 2623614005

METHOD BLANK: 163383 Matrix: Water
Associated Lab Samples: 2623614002, 2623614003, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	20.0	09/30/19 14:21	

LABORATORY CONTROL SAMPLE: 163384

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	100	100	85-115	

SAMPLE DUPLICATE: 163385

Parameter	Units	2623563001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	177	174	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 36336 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity, Low Level
Associated Lab Samples: 2623614001, 2623614004

METHOD BLANK: 164031 Matrix: Water
Associated Lab Samples: 2623614001, 2623614004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	1.0	1.0	10/02/19 12:39	

LABORATORY CONTROL SAMPLE: 164032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.0	96	85-115	

SAMPLE DUPLICATE: 164047

Parameter	Units	2623614004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	13.5	14.0	4	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 36055 Analysis Method: SM 4500-P
QC Batch Method: SM 4500-P Analysis Description: 4500PE Ortho Phosphorus
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

METHOD BLANK: 162666 Matrix: Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.020	09/27/19 10:41	

LABORATORY CONTROL SAMPLE: 162667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 162668 162669

Parameter	Units	2623638001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.021	0.5	0.5	0.53	0.53	101	102	80-120	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 36186 Analysis Method: SM 4500-S2 D
QC Batch Method: SM 4500-S2 D Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003

METHOD BLANK: 163399 Matrix: Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.20	0.20	09/30/19 14:59	

LABORATORY CONTROL SAMPLE: 163400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163401 163402

Parameter	Units	2623644003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.49	0.50	98	100	30-129	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 36187 Analysis Method: SM 4500-S2 D
QC Batch Method: SM 4500-S2 D Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 2623614004, 2623614005

METHOD BLANK: 163403 Matrix: Water
Associated Lab Samples: 2623614004, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.20	0.20	09/30/19 17:04	

LABORATORY CONTROL SAMPLE: 163404

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.45	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 163405 163406

Parameter	Units	2623614004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.40	0.40	81	80	30-129	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 36045 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

METHOD BLANK: 162623 Matrix: Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/L	0.013J	0.050	0.0050	09/27/19 01:45	

LABORATORY CONTROL SAMPLE: 162624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	10	10.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 162625 162626

Parameter	Units	2623614003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.66	10	10	11.2	11.2	105	105	90-110	0	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 500864 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

METHOD BLANK: 2694310 Matrix: Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003, 2623614004, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/19 17:49	
Fluoride	mg/L	ND	0.10	0.050	10/01/19 17:49	
Sulfate	mg/L	ND	1.0	0.50	10/01/19 17:49	

LABORATORY CONTROL SAMPLE: 2694311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694312 2694313

Parameter	Units	2623620013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	17.1	50	50	74.9	69.9	115	105	90-110	7	10	M1
Fluoride	mg/L	0.064J	2.5	2.5	2.9	2.7	115	104	90-110	10	10	M1
Sulfate	mg/L	80.1	50	50	123	123	85	86	90-110	0	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2694314 2694315

Parameter	Units	92447530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	22.7	50	50	76.0	75.5	107	106	90-110	1	10	
Fluoride	mg/L	0.073J	2.5	2.5	2.7	2.7	107	106	90-110	1	10	
Sulfate	mg/L	10.1	50	50	64.0	63.6	108	107	90-110	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 574635 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 2623614001, 2623614002, 2623614003

METHOD BLANK: 3122442 Matrix: Water
Associated Lab Samples: 2623614001, 2623614002, 2623614003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	10/01/19 22:06	

LABORATORY CONTROL SAMPLE: 3122443

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	18.6	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3122444 3122445

Parameter	Units	35500175001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.50U	20	20	22.1	22.2	108	109	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3122446 3122447

Parameter	Units	35500427009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	6.5	20	20	25.7	25.6	96	96	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Additional
Pace Project No.: 2623614

QC Batch: 574637 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 2623614004, 2623614005

METHOD BLANK: 3122448 Matrix: Water
Associated Lab Samples: 2623614004, 2623614005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	10/02/19 06:27	

LABORATORY CONTROL SAMPLE: 3122449

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	18.6	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3122450 3122451

Parameter	Units	2623614004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	20	20	19.4	19.4	96	96	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3124464 3124465

Parameter	Units	35501085001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.50U	20	20	20.2	20.3	99	100	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates AP Additional
Pace Project No.: 2623614

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA
PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2623614001	**YGWA-18S**				
2623614002	**YGWA-18I**				
2623614003	**YAMW-1**				
2623614004	**PZ-35**				
2623614005	**YGWC-33S**				
2623614001	**YGWA-18S**	EPA 3010A	501963	EPA 6010D	501984
2623614002	**YGWA-18I**	EPA 3010A	501963	EPA 6010D	501984
2623614003	**YAMW-1**	EPA 3010A	501963	EPA 6010D	501984
2623614004	**PZ-35**	EPA 3010A	501963	EPA 6010D	501984
2623614005	**YGWC-33S**	EPA 3010A	501963	EPA 6010D	501984
2623614002	**YGWA-18I**	SM 2320B	36180		
2623614003	**YAMW-1**	SM 2320B	36180		
2623614005	**YGWC-33S**	SM 2320B	36180		
2623614001	**YGWA-18S**	SM 2320B	36336		
2623614004	**PZ-35**	SM 2320B	36336		
2623614001	**YGWA-18S**	SM 3500 Fe -Fe2	36405		
2623614002	**YGWA-18I**	SM 3500 Fe -Fe2	36405		
2623614003	**YAMW-1**	SM 3500 Fe -Fe2	36405		
2623614004	**PZ-35**	SM 3500 Fe -Fe2	36405		
2623614005	**YGWC-33S**	SM 3500 Fe -Fe2	36405		
2623614001	**YGWA-18S**	SM 4500-P	36055		
2623614002	**YGWA-18I**	SM 4500-P	36055		
2623614003	**YAMW-1**	SM 4500-P	36055		
2623614004	**PZ-35**	SM 4500-P	36055		
2623614005	**YGWC-33S**	SM 4500-P	36055		
2623614001	**YGWA-18S**	SM 4500-S2 D	36186		
2623614002	**YGWA-18I**	SM 4500-S2 D	36186		
2623614003	**YAMW-1**	SM 4500-S2 D	36186		
2623614004	**PZ-35**	SM 4500-S2 D	36187		
2623614005	**YGWC-33S**	SM 4500-S2 D	36187		
2623614001	**YGWA-18S**	EPA 300.0	36045		
2623614002	**YGWA-18I**	EPA 300.0	36045		
2623614003	**YAMW-1**	EPA 300.0	36045		
2623614004	**PZ-35**	EPA 300.0	36045		
2623614005	**YGWC-33S**	EPA 300.0	36045		
2623614001	**YGWA-18S**	EPA 300.0 Rev 2.1 1993	500864		
2623614002	**YGWA-18I**	EPA 300.0 Rev 2.1 1993	500864		
2623614003	**YAMW-1**	EPA 300.0 Rev 2.1 1993	500864		
2623614004	**PZ-35**	EPA 300.0 Rev 2.1 1993	500864		
2623614005	**YGWC-33S**	EPA 300.0 Rev 2.1 1993	500864		
2623614001	**YGWA-18S**	SM 5310B	574635		
2623614002	**YGWA-18I**	SM 5310B	574635		
2623614003	**YAMW-1**	SM 5310B	574635		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates AP Additional
Pace Project No.: 2623614

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2623614004	**PZ-35**	SM 5310B	574637		
2623614005	**YGWC-33S**	SM 5310B	574637		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	ACC	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10382775	Pace Quote:	
Phone:	(404)506-7239 Fax:	Project Name:	Plant Yates AP Additional Parameters	Pace Project Manager:	betsy.mcdaniel@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	335.6

Regulatory Agency: —

State / Location: GA

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE START	COLLECTED TIME END	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N)	Analyses Test	Metals *	Alkalinity (carb + bicarb)	NO3, Cl, SO4, F	TOC (total organic carbon)	Ortho Phosphorus	Sulfide	Ferric Iron	Residual Chlorine (Y/N)	
1	YBWA-18S	W	G	9/26/19	10:45		7											✓	✓	✓	✓	✓	✓	✓		Fe^{2+} = 0
2	YBWA-18I	W	G	9/26/19	12:30		7											✓	✓	✓	✓	✓	✓	✓		Fe^{2+} = 0
3	YAMW-1	W	G	9/26/19	10:05		7											✓	✓	✓	✓	✓	✓	✓		Fe^{2+} = 0
4	PZ-35	W	G	9/26/19	11:00		7											✓	✓	✓	✓	✓	✓	✓		Fe^{2+} = 0
5	YBWC-33S	W	C	9/26/19	10:50		7											✓	✓	✓	✓	✓	✓	✓		Fe^{2+} = 0
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Fe^{2+} (Field test)

WO# : 2623614

2623614

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals list: Al,Ca,Fe,Mg,Mn,K,Na	C. Parker ACC	9-26-19	1515	M Dahman	9/26/19	1575	0.2 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: C. Parker, A. James, J. Bradford

SIGNATURE of SAMPLER: C. Parker DATE Signed: 9/26/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
0.2	Y	Y	Y

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2623614

PM: BM Due Date: 10/03/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.2 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/26/19 MK

Temp should be above freezing to 6°C Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☐N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 12, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 09, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624146001	**YGWA-39**	Water	10/09/19 10:45	10/09/19 17:00
2624146002	**YGWA-40**	Water	10/09/19 09:46	10/09/19 17:00
2624146003	**YGWC-38**	Water	10/09/19 11:16	10/09/19 17:00
2624146004	**YGWC-41**	Water	10/09/19 14:02	10/09/19 17:00
2624146005	**YGWC-42**	Water	10/09/19 13:55	10/09/19 17:00
2624146006	**YGWC-43**	Water	10/09/19 12:10	10/09/19 17:00

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624146001	**YGWA-39**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	ANB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B	SA1	1	PASI-O
2624146002	**YGWA-40**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	ANB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B	SA1	1	PASI-O
2624146003	**YGWC-38**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	ANB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B	SA1	1	PASI-O
2624146004	**YGWC-41**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	ANB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B	SA1	1	PASI-O
2624146005	**YGWC-42**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	ANB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B	SA1	1	PASI-O
2624146006	**YGWC-43**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		SM 4500-S2 D	KN	1	PASI-GA
		EPA 300.0	ANB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B	SA1	1	PASI-O

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ANALYTICAL RESULTS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Sample: YGWA-39 **Lab ID: 2624146001** Collected: 10/09/19 10:45 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/09/19 10:45		
Iron, Ferrous	**1.5**	mg/L			1		10/09/19 10:45		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/10/19 17:39	10/18/19 06:43	7429-90-5	
Calcium	**2.4**	mg/L	0.50	0.14	1	10/10/19 17:39	10/27/19 18:04	7440-70-2	
Iron	**1.4**	mg/L	0.040	0.015	1	10/10/19 17:39	10/27/19 18:04	7439-89-6	
Magnesium	**3.0**	mg/L	0.050	0.011	1	10/10/19 17:39	10/18/19 06:43	7439-95-4	
Manganese	**0.22**	mg/L	0.040	0.0061	1	10/10/19 17:39	10/18/19 06:43	7439-96-5	
Potassium	**3.2**	mg/L	0.20	0.026	1	10/10/19 17:39	10/27/19 18:04	7440-09-7	
Sodium	**11.9**	mg/L	1.0	0.19	1	10/10/19 17:39	10/18/19 06:43	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**35.0**	mg/L	20.0	20.0	1		10/14/19 16:02		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:02		
Alkalinity, Total as CaCO3	**35.0**	mg/L	20.0	20.0	1		10/14/19 16:02		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	**1.4**	mg/L	0.20	0.20	1		10/30/19 00:17	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/10/19 11:53		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		10/11/19 15:27	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.013J**	mg/L	0.050	0.0050	1		10/10/19 03:04	14797-55-8	B
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.0**	mg/L	1.0	0.024	1		10/15/19 03:28	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 03:28	16984-48-8	
Sulfate	**14.7**	mg/L	1.0	0.017	1		10/15/19 03:28	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	**4.1**	mg/L	1.0	0.50	1		10/19/19 19:17	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Sample: YGWA-40 **Lab ID: 2624146002** Collected: 10/09/19 09:46 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/09/19 09:46		
Iron, Ferrous	**0.0**	mg/L			1		10/09/19 09:46		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/10/19 17:39	10/18/19 06:58	7429-90-5	
Calcium	**5.2**	mg/L	0.50	0.14	1	10/10/19 17:39	10/27/19 18:08	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	10/10/19 17:39	10/27/19 18:08	7439-89-6	
Magnesium	**2.9**	mg/L	0.050	0.011	1	10/10/19 17:39	10/18/19 06:58	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	10/10/19 17:39	10/18/19 06:58	7439-96-5	
Potassium	**2.0**	mg/L	0.20	0.026	1	10/10/19 17:39	10/27/19 18:08	7440-09-7	
Sodium	**7.9**	mg/L	1.0	0.19	1	10/10/19 17:39	10/18/19 06:58	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**9.5**	mg/L	1.0	1.0	1		10/17/19 11:42		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 11:42		
Alkalinity, Total as CaCO3	**9.5**	mg/L	1.0	1.0	1		10/17/19 11:42		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/30/19 00:17	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/10/19 11:54		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		10/11/19 15:27	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.026J**	mg/L	0.050	0.0050	1		10/10/19 03:26	14797-55-8	B
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.0**	mg/L	1.0	0.024	1		10/15/19 04:12	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 04:12	16984-48-8	
Sulfate	**27.6**	mg/L	1.0	0.017	1		10/15/19 04:12	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/19/19 19:31	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Sample: YGWC-38 **Lab ID: 2624146003** Collected: 10/09/19 11:16 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/09/19 11:16		
Iron, Ferrous	**0.0**	mg/L			1		10/09/19 11:16		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.068J**	mg/L	0.10	0.032	1	10/10/19 17:39	10/18/19 07:03	7429-90-5	
Calcium	**147**	mg/L	0.50	0.14	1	10/10/19 17:39	10/27/19 18:13	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	10/10/19 17:39	10/27/19 18:13	7439-89-6	
Magnesium	**73.2**	mg/L	0.050	0.011	1	10/10/19 17:39	10/18/19 07:03	7439-95-4	
Manganese	**0.11**	mg/L	0.040	0.0061	1	10/10/19 17:39	10/18/19 07:03	7439-96-5	
Potassium	**6.1**	mg/L	0.20	0.026	1	10/10/19 17:39	10/27/19 18:13	7440-09-7	
Sodium	**24.3**	mg/L	1.0	0.19	1	10/10/19 17:39	10/18/19 07:03	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**8.5**	mg/L	1.0	1.0	1		10/17/19 11:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 11:47		
Alkalinity, Total as CaCO3	**8.5**	mg/L	1.0	1.0	1		10/17/19 11:47		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/30/19 00:17	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/10/19 11:55		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		10/11/19 15:28	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.0**	mg/L	0.050	0.0050	1		10/10/19 03:48	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.8**	mg/L	1.0	0.024	1		10/15/19 04:34	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 04:34	16984-48-8	
Sulfate	**692**	mg/L	20.0	0.34	20		10/15/19 19:55	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/19/19 19:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Sample: YGWC-41 **Lab ID: 2624146004** Collected: 10/09/19 14:02 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/09/19 14:02		
Iron, Ferrous	**0.3**	mg/L			1		10/09/19 14:02		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.048J**	mg/L	0.10	0.032	1	10/10/19 17:39	10/18/19 07:18	7429-90-5	
Calcium	**30.9**	mg/L	0.50	0.14	1	10/10/19 17:39	10/27/19 18:18	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	10/10/19 17:39	10/27/19 18:18	7439-89-6	
Magnesium	**36.4**	mg/L	0.050	0.011	1	10/10/19 17:39	10/18/19 07:18	7439-95-4	
Manganese	**0.073**	mg/L	0.040	0.0061	1	10/10/19 17:39	10/18/19 07:18	7439-96-5	
Potassium	**3.5**	mg/L	0.20	0.026	1	10/10/19 17:39	10/27/19 18:18	7440-09-7	
Sodium	**20.5**	mg/L	1.0	0.19	1	10/10/19 17:39	10/18/19 07:18	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**4.5**	mg/L	1.0	1.0	1		10/17/19 11:38		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 11:38		
Alkalinity, Total as CaCO3	**4.5**	mg/L	1.0	1.0	1		10/17/19 11:38		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/30/19 00:17	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/10/19 11:56		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		10/11/19 15:48	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.50**	mg/L	0.050	0.0050	1		10/10/19 04:10	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	1.0	0.024	1		10/15/19 04:56	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 04:56	16984-48-8	
Sulfate	**256**	mg/L	10.0	0.17	10		10/15/19 20:17	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/19/19 20:47	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Sample: YGWC-42 **Lab ID: 2624146005** Collected: 10/09/19 13:55 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/09/19 13:55		
Iron, Ferrous	**0.0**	mg/L			1		10/09/19 13:55		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.047J**	mg/L	0.10	0.032	1	10/10/19 17:39	10/18/19 07:22	7429-90-5	
Calcium	**103**	mg/L	0.50	0.14	1	10/10/19 17:39	10/27/19 18:23	7440-70-2	
Iron	**0.35**	mg/L	0.040	0.015	1	10/10/19 17:39	10/27/19 18:23	7439-89-6	
Magnesium	**110**	mg/L	0.050	0.011	1	10/10/19 17:39	10/18/19 07:22	7439-95-4	
Manganese	**0.12**	mg/L	0.040	0.0061	1	10/10/19 17:39	10/18/19 07:22	7439-96-5	
Potassium	**11.7**	mg/L	0.20	0.026	1	10/10/19 17:39	10/27/19 18:23	7440-09-7	
Sodium	**28.8**	mg/L	1.0	0.19	1	10/10/19 17:39	10/18/19 07:22	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**36.0**	mg/L	20.0	20.0	1		10/14/19 16:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:21		
Alkalinity, Total as CaCO3	**36.0**	mg/L	20.0	20.0	1		10/14/19 16:21		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	**0.35**	mg/L	0.20	0.20	1		10/30/19 00:17	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/10/19 11:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		10/11/19 15:51	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.32**	mg/L	0.050	0.0050	1		10/10/19 04:31	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.3**	mg/L	1.0	0.024	1		10/15/19 05:19	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 05:19	16984-48-8	
Sulfate	**732**	mg/L	20.0	0.34	20		10/15/19 20:39	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/19/19 22:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Sample: YGWC-43 **Lab ID: 2624146006** Collected: 10/09/19 12:10 Received: 10/09/19 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/09/19 12:10		
Iron, Ferrous	**3.0**	mg/L			1		10/09/19 12:10		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/10/19 17:39	10/18/19 07:27	7429-90-5	
Calcium	**21.9**	mg/L	2.5	0.71	5	10/10/19 17:39	10/27/19 18:28	7440-70-2	
Iron	**26.0**	mg/L	0.20	0.076	5	10/10/19 17:39	10/27/19 18:28	7439-89-6	
Magnesium	**43.0**	mg/L	0.050	0.011	1	10/10/19 17:39	10/18/19 07:27	7439-95-4	
Manganese	**1.7**	mg/L	0.040	0.0061	1	10/10/19 17:39	10/18/19 07:27	7439-96-5	
Potassium	**8.1**	mg/L	1.0	0.13	5	10/10/19 17:39	10/27/19 18:28	7440-09-7	
Sodium	**20.7**	mg/L	1.0	0.19	1	10/10/19 17:39	10/18/19 07:27	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**42.0**	mg/L	20.0	20.0	1		10/14/19 16:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:23		
Alkalinity, Total as CaCO3	**42.0**	mg/L	20.0	20.0	1		10/14/19 16:23		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	**26.0**	mg/L	0.20	0.20	1		10/30/19 00:17	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/10/19 11:57		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2 D								
Sulfide	ND	mg/L	0.20	0.20	1		10/11/19 15:51	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.011J**	mg/L	0.050	0.0050	1		10/10/19 04:53	14797-55-8	B
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.4**	mg/L	1.0	0.024	1		10/15/19 05:41	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/15/19 05:41	16984-48-8	
Sulfate	**279**	mg/L	10.0	0.17	10		10/15/19 21:01	14808-79-8	
5310B TOC	Analytical Method: SM 5310B								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/19/19 22:21	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 36821 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

METHOD BLANK: 166361 Matrix: Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.032	10/18/19 05:40	
Calcium	mg/L	ND	0.50	0.14	10/18/19 05:40	
Iron	mg/L	ND	0.040	0.015	10/18/19 05:40	
Magnesium	mg/L	ND	0.050	0.011	10/18/19 05:40	
Manganese	mg/L	ND	0.040	0.0061	10/18/19 05:40	
Potassium	mg/L	ND	0.20	0.026	10/18/19 05:40	
Sodium	mg/L	ND	1.0	0.19	10/18/19 05:40	

LABORATORY CONTROL SAMPLE: 166362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	0.98	98	80-120	
Calcium	mg/L	1	1.0	100	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	101	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	104	80-120	
Sodium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166363 166364

Parameter	Units	2624145001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	mg/L	ND	1	1	1.0	0.98	99	96	75-125	2	20	
Calcium	mg/L	ND	1	1	10.7	10.3	52	3	75-125	5	20	M1
Iron	mg/L	ND	1	1	1.0	0.99	98	94	75-125	4	20	
Magnesium	mg/L	11.2	1	1	11.9	11.4	73	17	75-125	5	20	M1
Manganese	mg/L	0.0098J	1	1	1.0	0.99	100	98	75-125	2	20	
Potassium	mg/L	4.4J	1	1	4.7	4.5	38	14	75-125	5	20	M1
Sodium	mg/L	12.0	1	1	12.8	12.2	74	20	75-125	4	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 36911 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 2624146001, 2624146005, 2624146006

METHOD BLANK: 166867 Matrix: Water
Associated Lab Samples: 2624146001, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	20.0	10/14/19 15:24	

LABORATORY CONTROL SAMPLE: 166868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	99.0	99	85-115	

SAMPLE DUPLICATE: 166869

Parameter	Units	2624145001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	36.0	37.0	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 37108 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity, Low Level
Associated Lab Samples: 2624146002, 2624146003, 2624146004

METHOD BLANK: 167721 Matrix: Water
Associated Lab Samples: 2624146002, 2624146003, 2624146004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	1.0	1.0	10/17/19 11:36	

LABORATORY CONTROL SAMPLE: 167722

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.0	98	85-115	

SAMPLE DUPLICATE: 167723

Parameter	Units	2624146002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	9.5	9.5	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 36778 Analysis Method: SM 4500-P
QC Batch Method: SM 4500-P Analysis Description: 4500PE Ortho Phosphorus
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

METHOD BLANK: 166160 Matrix: Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.020	10/10/19 11:46	

LABORATORY CONTROL SAMPLE: 166161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166162 166163

Parameter	Units	2624145001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	ND	0.5	0.5	0.52	0.52	104	103	80-120	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 36871 Analysis Method: SM 4500-S2 D
QC Batch Method: SM 4500-S2 D Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

METHOD BLANK: 166674 Matrix: Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.20	0.20	10/11/19 14:47	

LABORATORY CONTROL SAMPLE: 166675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166676 166677

Parameter	Units	2624055001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.45	0.44	89	89	30-129	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 36731 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

METHOD BLANK: 165837 Matrix: Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/L	0.013J	0.050	0.0050	10/09/19 20:38	

LABORATORY CONTROL SAMPLE: 165838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	10	10.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 165839 165840

Parameter	Units	2624087002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.24	10	10	2.3	2.3	21	21	90-110	1	15	M1

MATRIX SPIKE SAMPLE: 166092

Parameter	Units	2624146006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	0.011J	10	10.3	102	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 36938 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

METHOD BLANK: 166950 Matrix: Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003, 2624146004, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.024	10/14/19 21:35	
Fluoride	mg/L	ND	0.30	0.029	10/14/19 21:35	
Sulfate	mg/L	ND	1.0	0.017	10/14/19 21:35	

LABORATORY CONTROL SAMPLE: 166951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.7	97	90-110	
Fluoride	mg/L	10	9.9	99	90-110	
Sulfate	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166952 166953

Parameter	Units	2624142005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.1	10	10	13.6	13.6	95	95	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.9	9.8	99	98	90-110	1	15	

MATRIX SPIKE SAMPLE: 166954

Parameter	Units	2624142006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.3	10	12.1	97	90-110	
Fluoride	mg/L	ND	10	10.2	102	90-110	
Sulfate	mg/L	279	10	23.4	-2560	90-110	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 579958 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 2624146001, 2624146002, 2624146003

METHOD BLANK: 3153230 Matrix: Water
Associated Lab Samples: 2624146001, 2624146002, 2624146003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	10/19/19 12:22	

LABORATORY CONTROL SAMPLE: 3153231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153232 3153233

Parameter	Units	2624408001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.5	20	20	21.5	21.5	100	100	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153234 3153235

Parameter	Units	2624399007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.0 U	20	20	18.8	18.6	94	93	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
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(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

QC Batch: 579960 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 2624146004, 2624146005, 2624146006

METHOD BLANK: 3153236 Matrix: Water
Associated Lab Samples: 2624146004, 2624146005, 2624146006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	10/19/19 20:19	

LABORATORY CONTROL SAMPLE: 3153237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	20	19.0	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153238 3153239

Parameter	Units	2624146004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	20	20	19.3	19.0	95	93	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153240 3153241

Parameter	Units	35505517009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.58J	20	20	19.7	19.3	95	94	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-GA	Pace Analytical Services - Atlanta, GA
PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624146001	**YGWA-39**				
2624146002	**YGWA-40**				
2624146003	**YGWC-38**				
2624146004	**YGWC-41**				
2624146005	**YGWC-42**				
2624146006	**YGWC-43**				
2624146001	**YGWA-39**	EPA 3010A	36821	EPA 6010D	36834
2624146002	**YGWA-40**	EPA 3010A	36821	EPA 6010D	36834
2624146003	**YGWC-38**	EPA 3010A	36821	EPA 6010D	36834
2624146004	**YGWC-41**	EPA 3010A	36821	EPA 6010D	36834
2624146005	**YGWC-42**	EPA 3010A	36821	EPA 6010D	36834
2624146006	**YGWC-43**	EPA 3010A	36821	EPA 6010D	36834
2624146001	**YGWA-39**	SM 2320B	36911		
2624146005	**YGWC-42**	SM 2320B	36911		
2624146006	**YGWC-43**	SM 2320B	36911		
2624146002	**YGWA-40**	SM 2320B	37108		
2624146003	**YGWC-38**	SM 2320B	37108		
2624146004	**YGWC-41**	SM 2320B	37108		
2624146001	**YGWA-39**	SM 3500 Fe -Fe2	37787		
2624146002	**YGWA-40**	SM 3500 Fe -Fe2	37787		
2624146003	**YGWC-38**	SM 3500 Fe -Fe2	37787		
2624146004	**YGWC-41**	SM 3500 Fe -Fe2	37787		
2624146005	**YGWC-42**	SM 3500 Fe -Fe2	37787		
2624146006	**YGWC-43**	SM 3500 Fe -Fe2	37787		
2624146001	**YGWA-39**	SM 4500-P	36778		
2624146002	**YGWA-40**	SM 4500-P	36778		
2624146003	**YGWC-38**	SM 4500-P	36778		
2624146004	**YGWC-41**	SM 4500-P	36778		
2624146005	**YGWC-42**	SM 4500-P	36778		
2624146006	**YGWC-43**	SM 4500-P	36778		
2624146001	**YGWA-39**	SM 4500-S2 D	36871		
2624146002	**YGWA-40**	SM 4500-S2 D	36871		
2624146003	**YGWC-38**	SM 4500-S2 D	36871		
2624146004	**YGWC-41**	SM 4500-S2 D	36871		
2624146005	**YGWC-42**	SM 4500-S2 D	36871		
2624146006	**YGWC-43**	SM 4500-S2 D	36871		
2624146001	**YGWA-39**	EPA 300.0	36731		
2624146002	**YGWA-40**	EPA 300.0	36731		
2624146003	**YGWC-38**	EPA 300.0	36731		
2624146004	**YGWC-41**	EPA 300.0	36731		
2624146005	**YGWC-42**	EPA 300.0	36731		
2624146006	**YGWC-43**	EPA 300.0	36731		
2624146001	**YGWA-39**	EPA 300.0	36938		
2624146002	**YGWA-40**	EPA 300.0	36938		
2624146003	**YGWC-38**	EPA 300.0	36938		

Pace Analytical Services, LLC
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(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates AP Addition. Para.
Pace Project No.: 2624146

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624146004	**YGWC-41**	EPA 300.0	36938		
2624146005	**YGWC-42**	EPA 300.0	36938		
2624146006	**YGWC-43**	EPA 300.0	36938		
2624146001	**YGWA-39**	SM 5310B	579958		
2624146002	**YGWA-40**	SM 5310B	579958		
2624146003	**YGWC-38**	SM 5310B	579958		
2624146004	**YGWC-41**	SM 5310B	579960		
2624146005	**YGWC-42**	SM 5310B	579960		
2624146006	**YGWC-43**	SM 5310B	579960		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	ACC	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10382775	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Yates AP Additional Parameters R6	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	335.6

Regulatory Agency: | State / Location: GA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): Metals *	Alkalinity (carb + bicarb)	NO3, Cl, SO4, F	TOC (total organic carbon)	Ortho Phosphorus *	Sulfide	Ferric Iron	Residual Chlorine (Y/N)	(Fe2+) mg/L
1	YGWA-39	W	G	10/9/19		10:45			7										✓	✓	✓	✓	✓	✓	✓		Fe2+ = 1.5
2	YGWA-40	W	G	10/9/19		09:46			7										✓	✓	✓	✓	✓	✓	✓		= 0.0
3	YGWC-38	W	G	10/9/19		11:16			7										✓	✓	✓	✓	✓	✓	✓		= 0.0
4	YGWC-41	W	G	10/9/19		14:02			7										✓	/	✓	✓	✓	✓	✓		= 0.3
5	YGWC-42	W	G	10/9/19		13:55			7										✓	✓	✓	✓	✓	✓	✓		= 0.0
6	YGWC-43	W	G	10/9/19		12:10			7										✓	✓	✓	✓	✓	✓	✓		= 3.0
7																											
8																											
9																											* ortho was field filtered
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
* Metals list: Al,Ca,Fe,Mg,Mn,K,Na	Taylor Hall / ACC	10-9-19	1700	Charles Hunter	10/9/19	1700	1.3	Y	Y	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chris Parker / R. Walker
SIGNATURE of SAMPLER: [signature] DATE Signed: 10/9/19

WO#: 2624146

Pace Analytical

Sample Condition Upon Receipt

WO# : 2624146

Client Name: GA Power CCR

PM: BM **Due Date: 10/16/19**

CLIENT: GAPower-CCR

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

Tracking #: _____

Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used 214 **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.3°C **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 10/9/19 CH

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☐N/A	11. Field Filtered
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased): _____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** _____

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

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

October 29, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
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CERTIFICATIONS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624197001	**YGWA-17S**	Water	10/10/19 10:18	10/10/19 16:35
2624197002	**YGWA-5D**	Water	10/10/19 12:30	10/10/19 16:35
2624197003	**YGWA-5I**	Water	10/10/19 13:49	10/10/19 16:35
2624197004	**YGWA-20S**	Water	10/10/19 13:30	10/10/19 16:35
2624197005	**YGWA-21I**	Water	10/10/19 14:30	10/10/19 16:35

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SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624197001	**YGWA-17S**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	MWB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624197002	**YGWA-5D**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624197003	**YGWA-5I**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624197004	**YGWA-20S**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624197005	**YGWA-21I**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Sample: YGWA-17S **Lab ID: 2624197001** Collected: 10/10/19 10:18 Received: 10/10/19 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/18/19 12:10		
Iron, Ferrous	**0**	mg/L			1		10/18/19 12:10		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.040J**	mg/L	0.10	0.032	1	10/14/19 15:50	10/17/19 23:55	7429-90-5	
Calcium	**2.4**	mg/L	0.50	0.14	1	10/14/19 15:50	10/17/19 23:55	7440-70-2	
Iron	**0.026J**	mg/L	0.040	0.015	1	10/14/19 15:50	10/17/19 23:55	7439-89-6	
Magnesium	**0.85**	mg/L	0.050	0.011	1	10/14/19 15:50	10/17/19 23:55	7439-95-4	
Manganese	**0.0085J**	mg/L	0.040	0.0061	1	10/14/19 15:50	10/17/19 23:55	7439-96-5	
Potassium	**0.38**	mg/L	0.20	0.026	1	10/14/19 15:50	10/17/19 23:55	7440-09-7	
Sodium	**11.7**	mg/L	1.0	0.19	1	10/14/19 15:50	10/17/19 23:55	7440-23-5	M1
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**16.0**	mg/L	1.0	1.0	1		10/17/19 15:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 15:58		
Alkalinity, Total as CaCO3	**16.0**	mg/L	1.0	1.0	1		10/17/19 15:58		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:41	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 10:58		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.6**	mg/L	0.050	0.0050	1		10/11/19 10:26	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.8**	mg/L	1.0	0.024	1		10/16/19 18:46	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/16/19 18:46	16984-48-8	
Sulfate	**5.5**	mg/L	1.0	0.017	1		10/16/19 18:46	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	**0.62J**	mg/L	1.0	0.50	1		10/16/19 22:43	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Sample: YGWA-5D **Lab ID: 2624197002** Collected: 10/10/19 12:30 Received: 10/10/19 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/18/19 12:10		
Iron, Ferrous	**0**	mg/L			1		10/18/19 12:10		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:24	7429-90-5	
Calcium	**24.2**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:24	7440-70-2	
Iron	**0.16**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:24	7439-89-6	
Magnesium	**4.3**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:24	7439-95-4	
Manganese	**0.52**	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:24	7439-96-5	
Potassium	**3.5**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:24	7440-09-7	
Sodium	**8.5**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:24	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**95.0**	mg/L	20.0	20.0	1		10/14/19 16:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:40		
Alkalinity, Total as CaCO3	**95.0**	mg/L	20.0	20.0	1		10/14/19 16:40		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:41	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	**0.041**	mg/L	0.020	0.020	1		10/14/19 10:59		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.010J**	mg/L	0.050	0.0050	1		10/11/19 11:12	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**4.3**	mg/L	1.0	0.024	1		10/16/19 17:37	16887-00-6	
Fluoride	**0.16J**	mg/L	0.30	0.029	1		10/16/19 17:37	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/16/19 17:37	14808-79-8	M1
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	**0.62J**	mg/L	1.0	0.50	1		10/16/19 23:20	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Sample: YGWA-5I **Lab ID: 2624197003** Collected: 10/10/19 13:49 Received: 10/10/19 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/18/19 12:10		
Iron, Ferrous	**0**	mg/L			1		10/18/19 12:10		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.062J**	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:29	7429-90-5	
Calcium	**2.4**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:29	7440-70-2	
Iron	**0.056**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:29	7439-89-6	
Magnesium	**2.5**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:29	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:29	7439-96-5	
Potassium	**1.5**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:29	7440-09-7	
Sodium	**9.8**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:29	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**26.0**	mg/L	20.0	20.0	1		10/14/19 16:46		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:46		
Alkalinity, Total as CaCO3	**26.0**	mg/L	20.0	20.0	1		10/14/19 16:46		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:41	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:01		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.6**	mg/L	0.050	0.0050	1		10/11/19 13:30	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**1.6**	mg/L	1.0	0.024	1		10/16/19 18:39	16887-00-6	
Fluoride	**1.1**	mg/L	0.30	0.029	1		10/16/19 18:39	16984-48-8	
Sulfate	**1.8**	mg/L	1.0	0.017	1		10/16/19 18:39	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/16/19 23:33	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Sample: YGWA-20S **Lab ID: 2624197004** Collected: 10/10/19 13:30 Received: 10/10/19 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/18/19 12:11		
Iron, Ferrous	**0**	mg/L			1		10/18/19 12:11		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.065J**	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:34	7429-90-5	
Calcium	**2.6**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:34	7440-70-2	
Iron	**0.035J**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:34	7439-89-6	
Magnesium	**0.62**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:34	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:34	7439-96-5	
Potassium	**0.59**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:34	7440-09-7	
Sodium	**8.3**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:34	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**22.0**	mg/L	20.0	20.0	1		10/14/19 16:50		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:50		
Alkalinity, Total as CaCO3	**22.0**	mg/L	20.0	20.0	1		10/14/19 16:50		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:41	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:02		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.76**	mg/L	0.050	0.0050	1		10/11/19 11:35	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.7**	mg/L	1.0	0.024	1		10/16/19 18:58	16887-00-6	
Fluoride	**0.099J**	mg/L	0.30	0.029	1		10/16/19 18:58	16984-48-8	
Sulfate	**0.058J**	mg/L	1.0	0.017	1		10/16/19 18:58	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/16/19 23:43	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Sample: YGWA-21I **Lab ID: 2624197005** Collected: 10/10/19 14:30 Received: 10/10/19 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/18/19 12:11		
Iron, Ferrous	**1.0**	mg/L			1		10/18/19 12:11		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:39	7429-90-5	
Calcium	**5.6**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:39	7440-70-2	
Iron	**1.6**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:39	7439-89-6	
Magnesium	**3.3**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:39	7439-95-4	
Manganese	**0.34**	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:39	7439-96-5	
Potassium	**2.9**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:39	7440-09-7	
Sodium	**17.1**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:39	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**62.0**	mg/L	20.0	20.0	1		10/14/19 16:55		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/14/19 16:55		
Alkalinity, Total as CaCO3	**62.0**	mg/L	20.0	20.0	1		10/14/19 16:55		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	**0.60**	mg/L	0.20	0.20	1		10/23/19 01:41	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:03		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.048J**	mg/L	0.050	0.0050	1		10/11/19 13:53	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**3.3**	mg/L	1.0	0.024	1		10/16/19 19:19	16887-00-6	
Fluoride	**0.11J**	mg/L	0.30	0.029	1		10/16/19 19:19	16984-48-8	
Sulfate	**3.6**	mg/L	1.0	0.017	1		10/16/19 19:19	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	**2.2**	mg/L	1.0	0.50	1		10/17/19 00:18	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 36935 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

METHOD BLANK: 166932 Matrix: Water
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.032	10/17/19 23:36	
Calcium	mg/L	ND	0.50	0.14	10/17/19 23:36	
Iron	mg/L	ND	0.040	0.015	10/17/19 23:36	
Magnesium	mg/L	ND	0.050	0.011	10/17/19 23:36	
Manganese	mg/L	ND	0.040	0.0061	10/17/19 23:36	
Potassium	mg/L	ND	0.20	0.026	10/17/19 23:36	
Sodium	mg/L	ND	1.0	0.19	10/17/19 23:36	

LABORATORY CONTROL SAMPLE: 166933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	0.99	99	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Iron	mg/L	1	0.99	99	80-120	
Magnesium	mg/L	1	1.0	100	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166934 166935

Parameter	Units	2624197001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	mg/L	0.040J	1	1	1.0	1.0	98	99	75-125	1	20	
Calcium	mg/L	2.4	1	1	3.4	3.4	98	103	75-125	1	20	
Iron	mg/L	0.026J	1	1	1.0	1.0	98	99	75-125	1	20	
Magnesium	mg/L	0.85	1	1	1.9	1.9	100	103	75-125	2	20	
Manganese	mg/L	0.0085J	1	1	0.98	1.0	98	99	75-125	2	20	
Potassium	mg/L	0.38	1	1	1.4	1.4	100	102	75-125	1	20	
Sodium	mg/L	11.7	1	1	12.8	13.2	104	143	75-125	3	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 36911 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 2624197002, 2624197003, 2624197004, 2624197005

METHOD BLANK: 166867 Matrix: Water
Associated Lab Samples: 2624197002, 2624197003, 2624197004, 2624197005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	20.0	10/14/19 15:24	

LABORATORY CONTROL SAMPLE: 166868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	99.0	99	85-115	

SAMPLE DUPLICATE: 166869

Parameter	Units	2624145001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	36.0	37.0	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 37139 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity, Low Level
Associated Lab Samples: 2624197001

METHOD BLANK: 167862 | Matrix: Water
Associated Lab Samples: 2624197001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	1.0	1.0	10/17/19 15:54	

LABORATORY CONTROL SAMPLE: 167863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.0	98	85-115	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 36878 Analysis Method: SM 4500-P
QC Batch Method: SM 4500-P Analysis Description: 4500PE Ortho Phosphorus
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

METHOD BLANK: 166885 Matrix: Water
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.020	10/14/19 10:57	

LABORATORY CONTROL SAMPLE: 166886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.46	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166738 166739

Parameter	Units	2624197002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.041	0.5	0.5	0.44	0.44	80	80	80-120	0	10	H1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 36842 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

METHOD BLANK: 166535 Matrix: Water
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.050	0.0050	10/11/19 07:48	

LABORATORY CONTROL SAMPLE: 166536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	10	10.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166537 166538

Parameter	Units	2623811008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.010J	10	10	10.6	10.7	106	106	90-110	0	15	H1

MATRIX SPIKE SAMPLE: 166539

Parameter	Units	2623811009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	0.020J	10	10.7	107	90-110	H1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 36994
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624197001

METHOD BLANK: 167201 Matrix: Water
Associated Lab Samples: 2624197001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.024	10/16/19 12:51	
Fluoride	mg/L	ND	0.30	0.029	10/16/19 12:51	
Sulfate	mg/L	0.019J	1.0	0.017	10/16/19 12:51	

LABORATORY CONTROL SAMPLE: 167202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.1	101	90-110	
Fluoride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	10.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 167203 167204

Parameter	Units	2624193002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.9	10	10	16.6	16.6	96	97	90-110	0	15	
Fluoride	mg/L	ND	10	10	9.9	10.1	99	101	90-110	1	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 37056 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624197002, 2624197003, 2624197004, 2624197005

METHOD BLANK: 167451 Matrix: Water
Associated Lab Samples: 2624197002, 2624197003, 2624197004, 2624197005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.036J	1.0	0.024	10/16/19 16:56	
Fluoride	mg/L	ND	0.30	0.029	10/16/19 16:56	
Sulfate	mg/L	ND	1.0	0.017	10/16/19 16:56	

LABORATORY CONTROL SAMPLE: 167452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.5	105	90-110	
Fluoride	mg/L	10	10.8	108	90-110	
Sulfate	mg/L	10	10.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 167453 167454

Parameter	Units	2624197002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	10	10	14.1	14.5	98	102	90-110	3	15	
Fluoride	mg/L	0.16J	10	10	10.5	10.8	103	106	90-110	3	15	
Sulfate	mg/L	ND	10	10	15.7	16.0	157	160	90-110	1	15	M1

MATRIX SPIKE SAMPLE: 167455

Parameter	Units	2624212004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5.0	10	15.3	103	90-110	
Fluoride	mg/L	0.13J	10	11.2	110	90-110	
Sulfate	mg/L	9.2	10	18.9	97	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

QC Batch: 504010 Analysis Method: SM 5310B-2011
QC Batch Method: SM 5310B-2011 Analysis Description: 5310B TOC
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

METHOD BLANK: 2708859 Matrix: Water
Associated Lab Samples: 2624197001, 2624197002, 2624197003, 2624197004, 2624197005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	10/16/19 22:03	

LABORATORY CONTROL SAMPLE: 2708860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2708861 2708862

Parameter	Units	2624197001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.62J	25	25	25.0	25.3	98	99	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2708863 2708864

Parameter	Units	2624212002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	24.6	24.6	97	97	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624197

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624197001	**YGWA-17S**				
2624197002	**YGWA-5D**				
2624197003	**YGWA-5I**				
2624197004	**YGWA-20S**				
2624197005	**YGWA-21I**				
2624197001	**YGWA-17S**	EPA 3010A	36935	EPA 6010D	36942
2624197002	**YGWA-5D**	EPA 3010A	36935	EPA 6010D	36942
2624197003	**YGWA-5I**	EPA 3010A	36935	EPA 6010D	36942
2624197004	**YGWA-20S**	EPA 3010A	36935	EPA 6010D	36942
2624197005	**YGWA-21I**	EPA 3010A	36935	EPA 6010D	36942
2624197002	**YGWA-5D**	SM 2320B	36911		
2624197003	**YGWA-5I**	SM 2320B	36911		
2624197004	**YGWA-20S**	SM 2320B	36911		
2624197005	**YGWA-21I**	SM 2320B	36911		
2624197001	**YGWA-17S**	SM 2320B	37139		
2624197001	**YGWA-17S**	SM 3500 Fe -Fe2	37389		
2624197002	**YGWA-5D**	SM 3500 Fe -Fe2	37389		
2624197003	**YGWA-5I**	SM 3500 Fe -Fe2	37389		
2624197004	**YGWA-20S**	SM 3500 Fe -Fe2	37389		
2624197005	**YGWA-21I**	SM 3500 Fe -Fe2	37389		
2624197001	**YGWA-17S**	SM 4500-P	36878		
2624197002	**YGWA-5D**	SM 4500-P	36878		
2624197003	**YGWA-5I**	SM 4500-P	36878		
2624197004	**YGWA-20S**	SM 4500-P	36878		
2624197005	**YGWA-21I**	SM 4500-P	36878		
2624197001	**YGWA-17S**	EPA 300.0	36842		
2624197002	**YGWA-5D**	EPA 300.0	36842		
2624197003	**YGWA-5I**	EPA 300.0	36842		
2624197004	**YGWA-20S**	EPA 300.0	36842		
2624197005	**YGWA-21I**	EPA 300.0	36842		
2624197001	**YGWA-17S**	EPA 300.0	36994		
2624197002	**YGWA-5D**	EPA 300.0	37056		
2624197003	**YGWA-5I**	EPA 300.0	37056		
2624197004	**YGWA-20S**	EPA 300.0	37056		
2624197005	**YGWA-21I**	EPA 300.0	37056		
2624197001	**YGWA-17S**	SM 5310B-2011	504010		
2624197002	**YGWA-5D**	SM 5310B-2011	504010		
2624197003	**YGWA-5I**	SM 5310B-2011	504010		
2624197004	**YGWA-20S**	SM 5310B-2011	504010		
2624197005	**YGWA-21I**	SM 5310B-2011	504010		

Sent from my iPhone

Begin forwarded message:

From: Christopher Parker <cdparker20@icloud.com>
Date: October 10, 2019 at 6:15:11 PM EDT
To: Chris Parker <chris.parker@atlcc.net>

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

Section A – Required Client Information:
Company: Georgia Power - Coal Combustion Residuals
Address: 2480 Maner Road, Atlanta, GA 30339
Email: [illegible]@southernco.com
Phone: (404)506-7239 Fax:
Requested Due Date:

Section B – Required Project Information:
Report To: Joju Abraham
Copy To: ACC
Purchase Order #: SCS10382778
Project Name: Plant Yates AP Additional Re[illegible] Pond 3
Project #:

Section C – Invoice Information:
Attention: scsinvoices@southernco.com
Company Name:
Address:
Pace Quote:
Pace Project Manager: betsy.mcdaniel@pacelabs.com
Pace Profile #: 372.6

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE	DATE	TIME	# OF CONTAINERS	Metals*	Alkalinity (carb + bicarb)	NO3, Cl, SO4, F	TOC (total organic carbon)	Ortho Phosphorus	Sulfide	Ferrous Iron	
1	YGWA-17S	W	G	10/10/19	10:18	7	✓	✓	✓	✓	✓	✓	✓	Fe^{2+} = 0.0
2	YGWA-5D	W	G	10/10/19	12:30	7	✓	✓	✓	✓	✓	✓	✓	Fe^{2+} = 0.0
3	YGWA-5I	W	G	10/10/19	13:49	7	✓	✓	✓	✓	✓	✓	✓	Fe^{2+} = 0.0
4	YGWA-20S	W	G	10/10/19	13:30	7	✓	✓	✓	✓	✓	✓	✓	Fe^{2+} = 0.0
5	YGWA-21I ~~YGWA-20I~~	W	G	10/10/19	14:30	7	✓	✓	✓	✓	✓	✓	✓	Fe^{2+} = 1.0
6														
7														
8														
9														
10														
11														
12														

*Metals list: Al,Ca,Fe,Mg,Mn,K,Na

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Ch Parker ACC	10-10-19	1635	M Dalman	10/10/19	1635	0.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: C. Parker, T. Little
SIGNATURE of SAMPLER: [signature] DATE Signed: 10/10/19

WO#: 2624197

2624197

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power

Project #

WO#: 2624197

PM: BM Due Date: 10/17/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

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

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used 83 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.9 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/10/19 MP

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☐N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 17, 2019

Betsy McDaniel
Pace Analytical Services, Inc

110 Technology Pkwy
Peachtree Corners GA 30092

RE: 2624197

Dear Betsy McDaniel: Order No: 1910G12

Analytical Environmental Services, Inc. received 5 samples on 10/16/2019 12:54:00 PM
for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/19-06/30/20.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective through 06/30/20 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Metals and PCM Asbestos), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/21.
These results relate only to the items tested as received. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Jessica Shilling

Jessica Shilling

Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

1910G12

Chain of Custody

PASI Atlanta Laboratory

Pace Analytical®
www.pacelabs.com

Workorder: 2624197 **Workorder Name:** Plant Yates Ash Pond-3 **Results Requested By:** 10/17/2019

Report / Invoice To	Subcontract To
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200 Email: betsy.mcdaniel@pacelabs.com	P.O._____ Analytical Environmental Services 3080 Presidential Dr, Atlanta, GA 30340

State of Sample Origin: GA

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	4500S2D Sulfide Water	LAB USE ONLY
1	YGWA-17S	10/10/2019 10:18	2624197001	Water		X	
2	YGWA-5D	10/10/2019 12:30	2624197002	Water		X	
3	YGWA-5I	10/10/2019 13:49	2624197003	Water		X	
4	YGWA-20S	10/10/2019 13:30	2624197004	Water		X	
5	YGWA-21I	10/10/2019 14:30	2624197005	Water		X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	M Dalman	10/16/19	A Grimm	10/16/19 1254
2				
3				

Comments

Cooler Temperature on Receipt °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

Analytical Environmental Services, Inc **Date:** 17-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWA-17S
Project Name:	2624197	**Collection Date:**	10/10/2019 10:18:00 AM
Lab ID:	1910G12-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWA-5D
Project Name:	2624197	**Collection Date:**	10/10/2019 12:30:00 PM
Lab ID:	1910G12-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWA-5I
Project Name:	2624197	**Collection Date:**	10/10/2019 1:49:00 PM
Lab ID:	1910G12-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWA-20S
Project Name:	2624197	**Collection Date:**	10/10/2019 1:30:00 PM
Lab ID:	1910G12-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWA-21I
Project Name:	2624197	**Collection Date:**	10/10/2019 2:30:00 PM
Lab ID:	1910G12-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Pace Analytical Services, Inc.** AES Work Order Number: **1910G12**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ■ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	◉	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	◉	○	○		
5.	Custody seals intact on shipping container?	◉	○	○		
6.	Temperature blanks present?	◉	○	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	◉	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	◉	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	◉	○	○		
10.	Sampler name and/or signature on COC?	○	◉	○		
11.	Were all samples received within holding time?	◉	○	○		
12.	TAT marked on the COC?	◉	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 0.9 °C Cooler 2 Temperature _____ °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). AP 10/16/19

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	◉	○	○		
17.	Custody seals present on sample containers?	○	◉	○		
18.	Custody seals intact on sample containers?	○	○	◉		
19.	Do sample container labels match the COC?	◉	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
20.	Are analyses requested indicated on the COC?	◉	○	○		
21.	Were all of the samples listed on the COC received?	◉	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	◉	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	◉	○	○		
24.	Were samples received in appropriate containers?	◉	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	○	○	◉		
26.	Were trip blanks submitted?	○	○	◉	listed on COC ☐ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). AP 10/16/19

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	◉	○	○		
29.	Containers meet preservation guidelines?	◉	○	○		
30.	Was pH adjusted at Sample Receipt?	○	○	◉		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). AP 10/16/19

Locked

Client: Pace Analytical Services, Inc
Project Name: 2624197
Lab Order: 1910G12

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1910G12-001A	YGWA-17S	10/10/2019 10:18:00AM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G12-002A	YGWA-5D	10/10/2019 12:30:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G12-003A	YGWA-5I	10/10/2019 1:49:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G12-004A	YGWA-20S	10/10/2019 1:30:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G12-005A	YGWA-21I	10/10/2019 2:30:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019

Client: Pace Analytical Services, Inc
Project Name: 2624197
Workorder: 1910G12

ANALYTICAL QC SUMMARY REPORT

BatchID: R409476

Sample ID: **MB-R409476**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **MBLK**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9211965**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	BRL	1.00									

Sample ID: **LCS-R409476**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **LCS**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9212009**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	148.0	1.00	148.0		100	90	110				

Sample ID: **1910E30-001AMS**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **MS**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9211986**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	36.00	1.00	14.80	20.00	108	80	120				

Sample ID: **1910E30-001AMSD**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **MSD**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9211989**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	32.00	1.00	14.80	20.00	81.1	80	120	36.00	11.8	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

November 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Kevin Herring for
Betsy McDaniel
betsy.mcdaniel@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Atlanta Certification IDs

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2624212001	**YGWC-24S**	Water	10/10/19 15:09	10/11/19 10:08
2624212002	**YGWC-36**	Water	10/10/19 16:16	10/11/19 10:08
2624212003	**YGWC-23S**	Water	10/10/19 17:56	10/11/19 10:08
2624212004	**YGWA-4I**	Water	10/10/19 15:07	10/11/19 10:08
2624212005	**YGWC-49**	Water	10/10/19 16:35	10/11/19 10:08

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2624212001	**YGWC-24S**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624212002	**YGWC-36**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624212003	**YGWC-23S**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624212004	**YGWA-4I**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A
2624212005	**YGWC-49**	EPA 6010D	KLH	7	PASI-GA
		SM 2320B	S1A	3	PASI-GA
		SM 3500 Fe -Fe2	LPH	1	PASI-GA
		SM 4500-P	JAD	1	PASI-GA
		EPA 300.0	MWB	1	PASI-GA
		EPA 300.0	ANB	3	PASI-GA
		SM 5310B-2011	ECH	1	PASI-A

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Sample: YGWC-24S **Lab ID: 2624212001** Collected: 10/10/19 15:09 Received: 10/11/19 10:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/10/19 15:09		
Iron, Ferrous	**0.0 mg/l**	mg/L			1		10/10/19 15:09		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:44	7429-90-5	
Calcium	**1.7**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:44	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:44	7439-89-6	
Magnesium	**1.3**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:44	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:44	7439-96-5	
Potassium	**0.61**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:44	7440-09-7	
Sodium	**7.9**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:44	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**13.0**	mg/L	1.0	1.0	1		10/17/19 12:04		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 12:04		
Alkalinity, Total as CaCO3	**13.0**	mg/L	1.0	1.0	1		10/17/19 12:04		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:53	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:06		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.5**	mg/L	0.050	0.0050	1		10/11/19 20:11	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**6.8**	mg/L	1.0	0.024	1		10/16/19 20:42	16887-00-6	
Fluoride	**0.030J**	mg/L	0.30	0.029	1		10/16/19 20:42	16984-48-8	
Sulfate	**0.21J**	mg/L	1.0	0.017	1		10/16/19 20:42	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/17/19 01:15	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Sample: YGWC-36 **Lab ID: 2624212002** Collected: 10/10/19 16:16 Received: 10/11/19 10:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/10/19 16:16		
Iron, Ferrous	**0.0 mg/l**	mg/L			1		10/10/19 16:16		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:48	7429-90-5	
Calcium	**12.2**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:48	7440-70-2	
Iron	**0.028J**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:48	7439-89-6	
Magnesium	**7.4**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:48	7439-95-4	
Manganese	**0.062**	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:48	7439-96-5	
Potassium	**1.9**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:48	7440-09-7	
Sodium	**18.2**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:48	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**12.0**	mg/L	1.0	1.0	1		10/17/19 12:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 12:09		
Alkalinity, Total as CaCO3	**12.0**	mg/L	1.0	1.0	1		10/17/19 12:09		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:53	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:07		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.6**	mg/L	0.050	0.0050	1		10/11/19 20:32	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	ND	mg/L	1.0	0.024	1		10/17/19 18:42	16887-00-6	
Fluoride	ND	mg/L	0.30	0.029	1		10/17/19 18:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.017	1		10/17/19 18:42	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/17/19 01:26	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Sample: YGWC-23S **Lab ID: 2624212003** Collected: 10/10/19 17:56 Received: 10/11/19 10:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/10/19 17:56		
Iron, Ferrous	**0.0 mg/l**	mg/L			1		10/10/19 17:56		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	**0.078J**	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 00:53	7429-90-5	
Calcium	**3.6**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 00:53	7440-70-2	
Iron	**0.080**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 00:53	7439-89-6	
Magnesium	**3.1**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 00:53	7439-95-4	
Manganese	ND	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 00:53	7439-96-5	
Potassium	**0.72**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 00:53	7440-09-7	
Sodium	**7.0**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 00:53	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**7.0**	mg/L	1.0	1.0	1		10/17/19 12:14		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 12:14		
Alkalinity, Total as CaCO3	**7.0**	mg/L	1.0	1.0	1		10/17/19 12:14		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:53	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:08		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.081**	mg/L	0.050	0.0050	1		10/11/19 20:53	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**2.0**	mg/L	1.0	0.024	1		10/16/19 22:23	16887-00-6	
Fluoride	**0.11J**	mg/L	0.30	0.029	1		10/16/19 22:23	16984-48-8	
Sulfate	**29.5**	mg/L	1.0	0.017	1		10/16/19 22:23	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/17/19 02:02	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Sample: YGWA-4I **Lab ID: 2624212004** Collected: 10/10/19 15:07 Received: 10/11/19 10:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/10/19 15:07		
Iron, Ferrous	**0.0 mg/l**	mg/L			1		10/10/19 15:07		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 01:08	7429-90-5	
Calcium	**9.9**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 01:08	7440-70-2	
Iron	ND	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 01:08	7439-89-6	
Magnesium	**5.7**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 01:08	7439-95-4	
Manganese	**0.0089J**	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 01:08	7439-96-5	
Potassium	**4.1**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 01:08	7440-09-7	
Sodium	**9.5**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 01:08	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**64.0**	mg/L	20.0	20.0	1		10/15/19 13:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	20.0	20.0	1		10/15/19 13:57		
Alkalinity, Total as CaCO3	**64.0**	mg/L	20.0	20.0	1		10/15/19 13:57		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:53	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:09		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**0.72**	mg/L	0.050	0.0050	1		10/11/19 22:32	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.0**	mg/L	1.0	0.024	1		10/16/19 22:44	16887-00-6	
Fluoride	**0.13J**	mg/L	0.30	0.029	1		10/16/19 22:44	16984-48-8	
Sulfate	**9.2**	mg/L	1.0	0.017	1		10/16/19 22:44	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	**0.55J**	mg/L	1.0	0.50	1		10/17/19 02:57	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Sample: YGWC-49 **Lab ID: 2624212005** Collected: 10/10/19 16:35 Received: 10/11/19 10:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Collected By	**Client**				1		10/10/19 16:35		
Iron, Ferrous	**0.0 mg/l**	mg/L			1		10/10/19 16:35		
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Aluminum	ND	mg/L	0.10	0.032	1	10/14/19 15:50	10/18/19 01:13	7429-90-5	
Calcium	**12.6**	mg/L	0.50	0.14	1	10/14/19 15:50	10/18/19 01:13	7440-70-2	
Iron	**0.088**	mg/L	0.040	0.015	1	10/14/19 15:50	10/18/19 01:13	7439-89-6	
Magnesium	**8.9**	mg/L	0.050	0.011	1	10/14/19 15:50	10/18/19 01:13	7439-95-4	
Manganese	**0.0076J**	mg/L	0.040	0.0061	1	10/14/19 15:50	10/18/19 01:13	7439-96-5	
Potassium	**1.9**	mg/L	0.20	0.026	1	10/14/19 15:50	10/18/19 01:13	7440-09-7	
Sodium	**17.2**	mg/L	1.0	0.19	1	10/14/19 15:50	10/18/19 01:13	7440-23-5	
2320B Alkalinity Low Level	Analytical Method: SM 2320B								
Alkalinity,Bicarbonate (CaCO3)	**14.2**	mg/L	1.0	1.0	1		10/17/19 12:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	1.0	1.0	1		10/17/19 12:21		
Alkalinity, Total as CaCO3	**14.2**	mg/L	1.0	1.0	1		10/17/19 12:21		
Iron, Ferric (Calculation)	Analytical Method: SM 3500 Fe -Fe2								
Iron, Ferric	ND	mg/L	0.20	0.20	1		10/23/19 01:53	7439-89-6	
4500PE Ortho Phosphorus	Analytical Method: SM 4500-P								
Orthophosphate as P	ND	mg/L	0.020	0.020	1		10/14/19 11:09		H1
300.0 IC Anions	Analytical Method: EPA 300.0								
Nitrate as N	**1.1**	mg/L	0.050	0.0050	1		10/11/19 22:52	14797-55-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**5.3**	mg/L	1.0	0.024	1		10/16/19 23:25	16887-00-6	
Fluoride	**0.090J**	mg/L	0.30	0.029	1		10/16/19 23:25	16984-48-8	
Sulfate	**79.5**	mg/L	10.0	0.17	10		10/17/19 19:23	14808-79-8	
5310B TOC	Analytical Method: SM 5310B-2011								
Total Organic Carbon	ND	mg/L	1.0	0.50	1		10/17/19 03:09	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 36935 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D MET
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

METHOD BLANK: 166932 Matrix: Water
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.032	10/17/19 23:36	
Calcium	mg/L	ND	0.50	0.14	10/17/19 23:36	
Iron	mg/L	ND	0.040	0.015	10/17/19 23:36	
Magnesium	mg/L	ND	0.050	0.011	10/17/19 23:36	
Manganese	mg/L	ND	0.040	0.0061	10/17/19 23:36	
Potassium	mg/L	ND	0.20	0.026	10/17/19 23:36	
Sodium	mg/L	ND	1.0	0.19	10/17/19 23:36	

LABORATORY CONTROL SAMPLE: 166933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	0.99	99	80-120	
Calcium	mg/L	1	0.99	99	80-120	
Iron	mg/L	1	0.99	99	80-120	
Magnesium	mg/L	1	1.0	100	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166934 166935

Parameter	Units	2624197001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	mg/L	0.040J	1	1	1.0	1.0	98	99	75-125	1	20	
Calcium	mg/L	2.4	1	1	3.4	3.4	98	103	75-125	1	20	
Iron	mg/L	0.026J	1	1	1.0	1.0	98	99	75-125	1	20	
Magnesium	mg/L	0.85	1	1	1.9	1.9	100	103	75-125	2	20	
Manganese	mg/L	0.0085J	1	1	0.98	1.0	98	99	75-125	2	20	
Potassium	mg/L	0.38	1	1	1.4	1.4	100	102	75-125	1	20	
Sodium	mg/L	11.7	1	1	12.8	13.2	104	143	75-125	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 36978
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Associated Lab Samples: 2624212004

METHOD BLANK: 167115 Matrix: Water
Associated Lab Samples: 2624212004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	20.0	10/15/19 12:36	

LABORATORY CONTROL SAMPLE: 167116

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	100	100	85-115	

SAMPLE DUPLICATE: 167128

Parameter	Units	2624285001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	52.0	51.0	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 37108 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity, Low Level
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212005

METHOD BLANK: 167721 Matrix: Water
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	1.0	1.0	10/17/19 11:36	

LABORATORY CONTROL SAMPLE: 167722

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.0	98	85-115	

SAMPLE DUPLICATE: 167723

Parameter	Units	2624146002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	9.5	9.5	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 36878 Analysis Method: SM 4500-P
QC Batch Method: SM 4500-P Analysis Description: 4500PE Ortho Phosphorus
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

METHOD BLANK: 166885 Matrix: Water
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.020	0.020	10/14/19 10:57	

LABORATORY CONTROL SAMPLE: 166886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.46	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166738 166739

Parameter	Units	2624197002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.041	0.5	0.5	0.44	0.44	80	80	80-120	0	10	H1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 36873 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

METHOD BLANK: 166699 Matrix: Water
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.050	0.0050	10/11/19 17:27	

LABORATORY CONTROL SAMPLE: 166700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	10	10.4	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 166701 166702

Parameter	Units	2624218001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	8.3			16.7	16.9				1	15	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 37056 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

METHOD BLANK: 167451 Matrix: Water
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.036J	1.0	0.024	10/16/19 16:56	
Fluoride	mg/L	ND	0.30	0.029	10/16/19 16:56	
Sulfate	mg/L	ND	1.0	0.017	10/16/19 16:56	

LABORATORY CONTROL SAMPLE: 167452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	10.5	105	90-110	
Fluoride	mg/L	10	10.8	108	90-110	
Sulfate	mg/L	10	10.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 167453 167454

Parameter	Units	2624197002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.3	10	10	14.1	14.5	98	102	90-110	3	15	
Fluoride	mg/L	0.16J	10	10	10.5	10.8	103	106	90-110	3	15	
Sulfate	mg/L	ND	10	10	15.7	16.0	157	160	90-110	1	15	M1

MATRIX SPIKE SAMPLE: 167455

Parameter	Units	2624212004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5.0	10	15.3	103	90-110	
Fluoride	mg/L	0.13J	10	11.2	110	90-110	
Sulfate	mg/L	9.2	10	18.9	97	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

QC Batch: 504010 Analysis Method: SM 5310B-2011
QC Batch Method: SM 5310B-2011 Analysis Description: 5310B TOC
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

METHOD BLANK: 2708859 Matrix: Water
Associated Lab Samples: 2624212001, 2624212002, 2624212003, 2624212004, 2624212005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.50	10/16/19 22:03	

LABORATORY CONTROL SAMPLE: 2708860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2708861 2708862

Parameter	Units	2624197001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.62J	25	25	25.0	25.3	98	99	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2708863 2708864

Parameter	Units	2624212002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	24.6	24.6	97	97	90-110	0	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(770)734-4200

QUALIFIERS

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-GA	Pace Analytical Services - Atlanta, GA

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Yates Ash Pond-3
Pace Project No.: 2624212

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2624212001	**YGWC-24S**				
2624212002	**YGWC-36**				
2624212003	**YGWC-23S**				
2624212004	**YGWA-4I**				
2624212005	**YGWC-49**				
2624212001	**YGWC-24S**	EPA 3010A	36935	EPA 6010D	36942
2624212002	**YGWC-36**	EPA 3010A	36935	EPA 6010D	36942
2624212003	**YGWC-23S**	EPA 3010A	36935	EPA 6010D	36942
2624212004	**YGWA-4I**	EPA 3010A	36935	EPA 6010D	36942
2624212005	**YGWC-49**	EPA 3010A	36935	EPA 6010D	36942
2624212004	**YGWA-4I**	SM 2320B	36978		
2624212001	**YGWC-24S**	SM 2320B	37108		
2624212002	**YGWC-36**	SM 2320B	37108		
2624212003	**YGWC-23S**	SM 2320B	37108		
2624212005	**YGWC-49**	SM 2320B	37108		
2624212001	**YGWC-24S**	SM 3500 Fe -Fe2	37390		
2624212002	**YGWC-36**	SM 3500 Fe -Fe2	37390		
2624212003	**YGWC-23S**	SM 3500 Fe -Fe2	37390		
2624212004	**YGWA-4I**	SM 3500 Fe -Fe2	37390		
2624212005	**YGWC-49**	SM 3500 Fe -Fe2	37390		
2624212001	**YGWC-24S**	SM 4500-P	36878		
2624212002	**YGWC-36**	SM 4500-P	36878		
2624212003	**YGWC-23S**	SM 4500-P	36878		
2624212004	**YGWA-4I**	SM 4500-P	36878		
2624212005	**YGWC-49**	SM 4500-P	36878		
2624212001	**YGWC-24S**	EPA 300.0	36873		
2624212002	**YGWC-36**	EPA 300.0	36873		
2624212003	**YGWC-23S**	EPA 300.0	36873		
2624212004	**YGWA-4I**	EPA 300.0	36873		
2624212005	**YGWC-49**	EPA 300.0	36873		
2624212001	**YGWC-24S**	EPA 300.0	37056		
2624212002	**YGWC-36**	EPA 300.0	37056		
2624212003	**YGWC-23S**	EPA 300.0	37056		
2624212004	**YGWA-4I**	EPA 300.0	37056		
2624212005	**YGWC-49**	EPA 300.0	37056		
2624212001	**YGWC-24S**	SM 5310B-2011	504010		
2624212002	**YGWC-36**	SM 5310B-2011	504010		
2624212003	**YGWC-23S**	SM 5310B-2011	504010		
2624212004	**YGWA-4I**	SM 5310B-2011	504010		
2624212005	**YGWC-49**	SM 5310B-2011	504010		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Joju Abraham	Attention:	scsinvoices@southernco.com
Address:	2480 Maner Road	Copy To:	ACC	Company Name:	
	Atlanta, GA 30339			Address:	
Email:	jabraham@southernco.com	Purchase Order #:	SCS10382775 Pond 3	Pace Quote:	
Phone:	(404)506-7239 Fax	Project Name:	Plant Yates AP Additional ~~Groundwater~~	Pace Project Manager:	betsy.mcdaniel@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	335.6

Regulatory Agency: —

State / Location: GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED ~~START~~ DATE	COLLECTED ~~START~~ TIME	COLLECTED ~~END~~ DATE	COLLECTED ~~END~~ TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analysis Test Y/N	Metals *	Alkalinity (carb + bicarb)	NO3, Cl, SO4, F	TOC (total organic carbon)	Ortho Phosphorus	Sulfide	Ferric Iron	Residual Chlorine (Y/N)	
1	YGWC-24S	WG	G	10-10-19	1509				7										✓	✓	✓	✓	✓	✓	✓		$Fe^{2+} = 0.0$ mg/L
2	YGWC-36	W	G	10-10-19	1616				7										✓	✓	✓	✓	✓	✓	✓		$Fe^{2+} = 0.0$ mg/L
3	YGWC-23S	W	G	10-10-19	1756				7										✓	✓	✓	✓	✓	✓	✓		$Fe^{2+} = 0.0$ mg/L
4	YGWA-4I	W	G	10-10-19	1507				7										✓	✓	✓	✓	✓	✓	✓		$Fe^{2+} = 0.0$ mg/L
5	YGWC-49	W	G	10-10-19	1635				7										✓	✓	✓	✓	✓	✓	✓		$Fe^{2+} = 0.0$ mg/L
6																											
7																											
8																											
9																											
10																											
11																											
12																											

WO# : 2624212

2624212

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals list: Al,Ca,Fe,Mg,Mn,K,Na	Ryan Walker ACC	10.11.19	1008	MDaniel	10/11/19	1008	

SAMPLER NAME AND SIGNATURE							
PRINT Name of SAMPLER:	Taylor Goble / Ryan Walker						
SIGNATURE of SAMPLER:	Taylor Goble Ryan Walker	DATE Signed:	10-10-19	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				1.7	Y	Y	Y

Sample Condition Upon Receipt

Pace Analytical

Client Name: GA Power Project #

WO#: 2624212

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #:

PM: BM Due Date: 10/18/19

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes [CLIENT: GAPower-CCR

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used 83 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.7 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/11/19 MP

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☐N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:**

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

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 18, 2019

Betsy McDaniel
Pace Analytical Services, Inc

110 Technology Pkwy
Peachtree Corners GA 30092

RE: 2624212

Dear Betsy McDaniel: Order No: 1910G13

Analytical Environmental Services, Inc. received 5 samples on 10/16/2019 12:54:00 PM
for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/19-06/30/20.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective through 06/30/20 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Metals and PCM Asbestos), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/21.
These results relate only to the items tested as received. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Jessica Shilling

Jessica Shilling

Project Manager

1910G13

Chain of Custody

PASI Atlanta Laboratory

Pace Analytical®
www.pacelabs.com

Workorder: 2624212 **Workorder Name:** Plant Yates Ash Pond-3 **Results Requested By:** 10/18/2019

Report / Invoice To	Subcontract To
Betsy McDaniel Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200 Email: betsy.mcdaniel@pacelabs.com	P.O._____ Analytical Environmental Services 3080 Presidential Dr, Atlanta, GA 30340

State of Sample Origin: GA

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	4500S2D Sulfide Water	LAB USE ONLY
1	YGWC-24S	10/10/2019 15:09	2624212001	Water		X	
2	YGWC-36	10/10/2019 16:16	2624212002	Water		X	
3	YGWC-23S	10/10/2019 17:56	2624212003	Water		X	
4	YGWA-4I	10/10/2019 15:07	2624212004	Water		X	
5	YGWC-49	10/10/2019 16:35	2624212005	Water		X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	10/16/19	[signature] Client	10/16/19 1254
2				
3				

Comments

Cooler Temperature on Receipt ____ °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

Analytical Environmental Services, Inc **Date:** 18-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWC-24S
Project Name:	2624212	**Collection Date:**	10/10/2019 3:09:00 PM
Lab ID:	1910G13-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 18-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWC-36
Project Name:	2624212	**Collection Date:**	10/10/2019 4:16:00 PM
Lab ID:	1910G13-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 18-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWC-23S
Project Name:	2624212	**Collection Date:**	10/10/2019 5:56:00 PM
Lab ID:	1910G13-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 18-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWA-4I
Project Name:	2624212	**Collection Date:**	10/10/2019 3:07:00 PM
Lab ID:	1910G13-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 18-Oct-19

Client:	Pace Analytical Services, Inc	**Client Sample ID:**	YGWC-49
Project Name:	2624212	**Collection Date:**	10/10/2019 4:35:00 PM
Lab ID:	1910G13-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Sulfide by SM4500-S2-F								
Sulfide	BRL	1.00		mg/L	R409476	1	10/17/2019 09:50	AT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **Pace Analytical Services, Inc.** AES Work Order Number: **1910G13**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ■ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	◉	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	◉	○	○		
5.	Custody seals intact on shipping container?	◉	○	○		
6.	Temperature blanks present?	◉	○	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	◉	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	◉	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	◉	○	○		
10.	Sampler name and/or signature on COC?	○	◉	○		
11.	Were all samples received within holding time?	◉	○	○		
12.	TAT marked on the COC?	◉	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 0.9 °C Cooler 2 Temperature _____ °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). AP 10/16/19

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	◉	○	○		
17.	Custody seals present on sample containers?	○	◉	○		
18.	Custody seals intact on sample containers?	○	○	◉		
19.	Do sample container labels match the COC?	◉	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
20.	Are analyses requested indicated on the COC?	◉	○	○		
21.	Were all of the samples listed on the COC received?	◉	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	◉	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	◉	○	○		
24.	Were samples received in appropriate containers?	◉	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	○	○	◉		
26.	Were trip blanks submitted?	○	○	◉	listed on COC ☐ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). AP 10/16/19

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	◉	○	○		
29.	Containers meet preservation guidelines?	◉	○	○		
30.	Was pH adjusted at Sample Receipt?	○	○	◉		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). AP 10/16/19

Locked

Client: Pace Analytical Services, Inc
Project Name: 2624212
Lab Order: 1910G13

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1910G13-001A	YGWC-24S	10/10/2019 3:09:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G13-002A	YGWC-36	10/10/2019 4:16:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G13-003A	YGWC-23S	10/10/2019 5:56:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G13-004A	YGWA-4I	10/10/2019 3:07:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019
1910G13-005A	YGWC-49	10/10/2019 4:35:00PM	Aqueous	Sulfide by SM4500-S2-F			10/17/2019

Client: Pace Analytical Services, Inc
Project Name: 2624212
Workorder: 1910G13

ANALYTICAL QC SUMMARY REPORT

BatchID: R409476

Sample ID: **MB-R409476**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **MBLK**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9211965**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	BRL	1.00									

Sample ID: **LCS-R409476**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **LCS**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9212009**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	148.0	1.00	148.0		100	90	110				

Sample ID: **1910E30-001AMS**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **MS**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9211986**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	36.00	1.00	14.80	20.00	108	80	120				

Sample ID: **1910E30-001AMSD**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **409476**
SampleType: **MSD**	TestCode: **Sulfide by SM4500-S2-F**				BatchID: **R409476**		Analysis Date: **10/17/2019**		Seq No: **9211989**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	32.00	1.00	14.80	20.00	81.1	80	120	36.00	11.8	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Product Name: Low-Flow System

Date: 2019-09-26 11:01:33

Project Information:		Pump Information:	
Operator Name	Jordan Berisford	Pump Model/Type	QED Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates AP-3	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	PZ-35	Final Pumping Rate	175 mL/min
Well diameter	2 in	Total System Volume	0.3131711 L
Well Total Depth	50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2.8 in
Depth to Water	13.27 ft	Total Volume Pumped	4.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	10:40:03	300.04	23.88	5.67	113.90	0.53	13.50	4.33	91.09
Last 5	10:45:03	600.02	23.21	5.61	115.82	0.55	13.50	4.43	100.64
Last 5	10:50:03	900.02	23.06	5.60	115.30	0.73	13.50	4.41	108.00
Last 5	10:55:03	1200.02	23.61	5.59	116.42	0.59	13.50	4.46	113.59
Last 5	11:00:05	1502.02	24.02	5.59	115.13	0.52	13.50	4.37	119.17
Variance 0			-0.15	-0.01	-0.52			-0.02	7.36
Variance 1			0.54	-0.01	1.11			0.05	5.59
Variance 2			0.41	-0.00	-1.29			-0.08	5.59

Notes

Sunny, 80s, Sample time 1100

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 10:10:15

Project Information:		Pump Information:	
Operator Name	Jordan Berisford	Pump Model/Type	QED Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates AP-3	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	74 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	646777		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	YAMW-1	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.4202933 L
Well Total Depth	70.53 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	21 in
Depth to Water	13.05 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5%	+/- 0.1	+/- 5%	+/- 100		+/- 10%	+/- 100
Last 5	09:45:10	1200.02	22.67	6.60	296.45	1.10	14.60	0.77	135.36
Last 5	09:50:10	1500.02	22.90	6.62	293.85	0.99	14.70	0.72	134.34
Last 5	09:55:10	1800.02	22.81	6.62	292.80	0.83	14.70	0.68	133.26
Last 5	10:00:10	2100.01	23.22	6.61	291.04	0.63	14.70	0.64	131.59
Last 5	10:05:10	2400.01	23.30	6.60	286.35	0.55	14.80	0.69	130.24
Variance 0			-0.09	0.00	-1.05			-0.04	-1.08
Variance 1			0.41	-0.01	-1.75			-0.04	-1.67
Variance 2			0.08	-0.01	-4.70			0.04	-1.35

Notes

Sunny, Sample time 1005, 80s

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 15:08:33

Project Information:		Pump Information:	
Operator Name	Taylor Goble	Pump Model/Type	Bladder Pump
Company Name	ACC	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	50 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	HACH	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWA-4I	Final Pumping Rate	125 mL/min
Well diameter	2 in	Total System Volume	0.5726365 L
Well Total Depth	49.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	12 in
Depth to Water	25.16 ft	Total Volume Pumped	4.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	14:42:34	600.02	18.43	6.19	154.22	0.62	25.87	2.25	27.82
Last 5	14:52:34	1200.66	18.34	6.19	156.83	0.55	25.93	1.68	21.47
Last 5	14:57:35	1501.66	18.27	6.19	156.96	0.61	26.00	1.62	19.00
Last 5	15:02:35	1801.66	18.26	6.19	156.50	0.53	26.09	1.58	17.52
Last 5	15:07:36	2102.66	18.21	6.19	156.20	--	--	1.59	16.12
Variance 0			-0.08	0.00	0.13			-0.05	-2.47
Variance 1			-0.01	-0.00	-0.47			-0.04	-1.48
Variance 2			-0.05	-0.00	-0.29			0.01	-1.40

Notes

Sampled at 1507. Sunny 80 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 12:31:40

Project Information:		Pump Information:	
Operator Name	Taylor Goble	Pump Model/Type	Bladder Pump
Company Name	ACC	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	132 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	HACH	Pump placement from TOC	127 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5D	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	1.364161 L
Well Total Depth	131.60 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	1 in
Depth to Water	24.64 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	12:10:19	3004.87	19.50	7.32	225.38	1.03	24.70	1.67	-63.53
Last 5	12:15:20	3305.87	19.41	7.32	221.71	1.11	24.70	1.59	-61.56
Last 5	12:20:22	3607.87	19.15	7.29	216.68	1.17	24.70	1.25	-57.03
Last 5	12:25:23	3908.79	19.11	7.26	213.86	0.96	24.70	1.19	-54.47
Last 5	12:30:23	4208.79	19.10	7.26	211.37	1.08	24.70	1.13	-48.50
Variance 0			-0.27	-0.03	-5.03			-0.34	4.53
Variance 1			-0.04	-0.03	-2.82			-0.06	2.56
Variance 2			-0.00	-0.01	-2.48			-0.06	5.97

Notes

Sampled at 1230. Sunny 73 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 13:49:59

Project Information:		Pump Information:	
Operator Name	Taylor Goble	Pump Model/Type	Bladder Pump
Company Name	ACC	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	59 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	HACH	Pump placement from TOC	54 ft

Well Information:		Pumping Information:	
Well ID	YGWA-5I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.6595111 L
Well Total Depth	58.50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	21.71 ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	13:29:03	900.02	18.26	6.14	86.26	1.05	21.94	5.91	18.44
Last 5	13:34:03	1200.02	18.22	5.97	86.31	1.33	21.94	5.82	20.74
Last 5	13:39:03	1500.02	18.19	5.89	86.19	1.15	21.94	5.74	22.01
Last 5	13:44:03	1800.02	18.15	5.84	86.20	1.08	21.94	5.72	22.49
Last 5	13:49:03	2100.02	18.08	5.80	86.22	1.05	21.94	5.74	23.41
Variance 0			-0.03	-0.08	-0.12			-0.07	1.27
Variance 1			-0.04	-0.04	0.01			-0.02	0.48
Variance 2			-0.08	-0.04	0.02			0.02	0.92

Notes

Sampled at 1349. Sunny 75 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 10:21:01

Project Information:		Pump Information:	
Operator Name	Taylor Goble	Pump Model/Type	Bladder Pump
Company Name	ACC	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	40 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	HACH	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	YGWA-17S	Final Pumping Rate	120 mL/min
Well diameter	2 in	Total System Volume	0.4761093 L
Well Total Depth	39.91 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	15.87 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	09:58:16	300.15	19.28	7.42	82.49	2.37	16.04	3.94	117.75
Last 5	10:03:16	600.02	19.12	5.95	80.35	2.12	16.02	2.65	101.23
Last 5	10:08:16	900.02	19.15	5.65	79.21	1.56	16.02	2.03	91.56
Last 5	10:13:16	1200.02	19.15	5.61	80.09	1.08	16.02	2.03	79.11
Last 5	10:18:16	1500.02	19.19	5.56	81.21	0.88	16.02	2.03	69.99
Variance 0			0.02	-0.30	-1.14			-0.62	-9.68
Variance 1			0.00	-0.05	0.88			-0.00	-12.44
Variance 2			0.04	-0.04	1.12			-0.00	-9.12

Notes

Sampled at 1018. Sunny 69 degrees

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 12:29:44

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18I	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	79.67 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	3 in
Depth to Water	25.57 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:07:35	600.01	21.91	6.25	109.47	13.00	25.80	1.96	108.59
Last 5	12:12:35	900.01	19.56	6.04	108.69	8.76	25.80	3.10	124.34
Last 5	12:17:35	1200.00	19.12	6.04	109.17	6.03	25.80	3.23	123.56
Last 5	12:22:35	1499.99	19.06	6.03	108.92	4.54	25.80	3.21	123.15
Last 5	12:27:35	1799.98	18.84	6.04	108.94	3.75	25.80	3.20	120.95
Variance 0			-0.44	0.01	0.49			0.13	-0.78
Variance 1			-0.06	-0.01	-0.25			-0.01	-0.41
Variance 2			-0.22	0.01	0.02			-0.01	-2.20

Notes

Sampled at 12:30. Sunny 80s. DUP 2 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 10:43:23

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Plant Yates - AP3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	40 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	35 ft

Well Information:		Pumping Information:	
Well ID	YGWA-18S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.8711092 L
Well Total Depth	39.86 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	14 in
Depth to Water	22.65 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:20:55	900.00	18.35	5.20	60.97	7.65	23.70	1.38	147.93
Last 5	10:25:55	1199.99	18.39	5.20	60.89	6.91	23.80	1.25	147.97
Last 5	10:30:55	1499.99	18.41	5.20	60.75	5.69	23.80	1.22	146.19
Last 5	10:35:55	1799.98	18.35	5.20	60.63	5.20	23.80	1.21	145.95
Last 5	10:40:55	2099.97	18.46	5.20	60.57	4.87	23.80	1.21	145.76
Variance 0			0.02	0.00	-0.14			-0.03	-1.79
Variance 1			-0.06	-0.00	-0.12			-0.02	-0.24
Variance 2			0.12	0.00	-0.06			0.00	-0.19

Notes

Sampled at 10:45. Sunny 80s. FB 1 here at 10:30 - gloves

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 13:28:28

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	30 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	25 ft

Well Information:		Pumping Information:	
Well ID	YGWA-20S	Final Pumping Rate	180 mL/min
Well diameter	2 in	Total System Volume	0.6189027 L
Well Total Depth	29.71 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	8 in
Depth to Water	13.04 ft	Total Volume Pumped	18 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:06:27	4499.92	56.75	5.96	32.34	4.81	13.70	1.94	357.27
Last 5	13:11:27	4799.91	60.08	5.96	31.07	4.65	13.70	2.27	442.28
Last 5	13:16:27	5099.90	61.91	5.96	30.14	4.27	13.70	3.13	496.04
Last 5	13:21:28	5400.90	62.46	5.96	30.29	3.91	13.70	3.27	545.87
Last 5	13:26:28	5700.89	62.03	5.96	30.32	3.77	13.70	3.16	591.58
Variance 0			1.84	-0.00	-0.93			0.86	53.76
Variance 1			0.55	0.00	0.16			0.14	49.83
Variance 2			-0.44	-0.01	0.02			-0.11	45.71

Notes

Sampled at 13:30. Sunny 70s

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 14:25:57

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWA-21I	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.07 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	6 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:04:05	600.01	65.64	6.58	82.73	7.86	--	0.97	34.51
Last 5	14:09:05	900.01	65.99	6.57	77.03	6.69	--	0.66	44.24
Last 5	14:14:05	1200.00	65.28	6.56	74.32	5.25	--	0.36	56.05
Last 5	14:19:05	1499.99	66.00	6.56	73.41	3.67	--	0.27	64.06
Last 5	14:24:05	1799.98	67.27	6.57	72.42	2.55	--	0.28	62.35
Variance 0			-0.71	-0.01	-2.71			-0.29	11.81
Variance 1			0.71	-0.00	-0.91			-0.09	8.01
Variance 2			1.28	0.01	-0.99			0.01	-1.71

Notes

Sampled at 14:30. Sunny 80s. Transducer in well.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 10:45:04

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	68 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	63 ft

Well Information:		Pumping Information:	
Well ID	YGWA-39	Final Pumping Rate	260 mL/min
Well diameter	2 in	Total System Volume	1.141386 L
Well Total Depth	68.50 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	7 in
Depth to Water	23.85 ft	Total Volume Pumped	10.5 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	10:21:43	600.01	21.33	5.79	124.35	2.03	24.30	0.13	52.37
Last 5	10:26:43	900.06	21.09	5.81	121.57	2.21	24.30	0.08	51.88
Last 5	10:31:43	1200.01	21.23	5.81	113.84	1.90	24.40	0.08	53.51
Last 5	10:36:43	1499.99	19.81	5.81	113.14	1.63	24.40	0.10	54.62
Last 5	10:41:47	1803.98	20.33	5.81	109.37	1.52	24.40	0.10	56.02
Variance 0			0.13	0.00	-7.73			-0.00	1.63
Variance 1			-1.42	-0.00	-0.70			0.02	1.11
Variance 2			0.52	-0.00	-3.77			-0.00	1.40

Notes

Sampled at 10:45. Cloudy 60s. DUP 1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 09:46:56

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	R6	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	48 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	43 ft

Well Information:		Pumping Information:	
Well ID	YGWA-40	Final Pumping Rate	100 mL/min
Well diameter	2 in	Total System Volume	0.6042444 L
Well Total Depth	48.35 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10 in
Depth to Water	28.00 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	09:26:22	600.06	18.35	5.19	109.34	1.12	28.80	5.58	80.60
Last 5	09:31:22	900.01	18.30	5.22	109.97	1.47	28.80	5.59	79.19
Last 5	09:36:22	1200.00	18.30	5.21	110.48	1.48	28.80	5.60	79.77
Last 5	09:41:22	1500.00	18.30	5.19	110.50	1.22	28.80	5.60	82.67
Last 5	09:46:22	1799.99	18.25	5.22	110.63	1.28	28.80	5.61	79.58
Variance 0			0.00	-0.02	0.51			0.01	0.58
Variance 1			0.00	-0.02	0.02			0.00	2.90
Variance 2			-0.06	0.03	0.13			0.01	-3.09

Notes

Sampled at 09:46. Cloudy, 60’s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 17:56:27

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	39 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	34 ft

Well Information:		Pumping Information:	
Well ID	YGWC-23S	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.7664565 L
Well Total Depth	39.18 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	7.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	17:35:55	1800.00	19.66	5.77	93.83	18.40	--	8.58	101.58
Last 5	17:40:55	2099.99	19.90	5.79	93.76	12.20	--	8.57	100.85
Last 5	17:45:55	2399.98	19.99	5.78	93.33	7.25	--	8.55	101.32
Last 5	17:50:55	2699.96	19.99	5.76	93.00	5.96	--	8.58	102.23
Last 5	17:55:55	2999.97	19.86	5.79	92.54	4.91	--	8.54	101.33
Variance 0			0.09	-0.01	-0.43			-0.02	0.46
Variance 1			0.00	-0.02	-0.33			0.04	0.91
Variance 2			-0.14	0.02	-0.46			-0.04	-0.90

Notes

Sampled at 17:56. Sunny, 70’s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 15:09:46

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	57 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	52 ft

Well Information:		Pumping Information:	
Well ID	YGWC-24S	Final Pumping Rate	250 mL/min
Well diameter	2 in	Total System Volume	0.9402057 L
Well Total Depth	57.01 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	29.03 ft	Total Volume Pumped	9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	14:49:01	900.01	20.31	5.68	61.24	0.98	29.80	6.19	89.70
Last 5	14:54:01	1200.01	20.23	5.66	61.36	0.79	29.80	6.22	91.59
Last 5	14:59:01	1500.00	20.30	5.69	61.65	0.85	29.80	6.29	90.76
Last 5	15:04:01	1799.99	20.26	5.68	61.78	0.75	29.80	6.32	91.58
Last 5	15:09:01	2099.99	20.31	5.60	61.97	0.77	29.80	6.38	95.00
Variance 0			0.07	0.03	0.29			0.08	-0.82
Variance 1			-0.04	-0.01	0.13			0.02	0.82
Variance 2			0.05	-0.08	0.19			0.06	3.43

Notes

Sampled at 15:09. Sunny, 80’s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-09-26 10:56:32

Project Information:		Pump Information:	
Operator Name	A. James	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	poly
Project Name	Plant Yates - AP 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	42 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	647057		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	37 ft

Well Information:		Pumping Information:	
Well ID	YGWA-14S	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	0.8904147 L
Well Total Depth	38.73 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:25:13	600.03	20.96	3.71	1172.05	2.37	--	0.47	175.95
Last 5	10:30:13	900.02	21.17	3.72	1163.56	2.86	--	0.46	188.65
Last 5	10:35:13	1200.01	21.28	3.73	1161.76	2.19	--	0.44	199.23
Last 5	10:40:13	1500.00	21.31	3.74	1158.03	0.97	--	0.43	209.10
Last 5	10:45:13	1800.01	21.31	3.74	1161.06	1.27	--	0.41	219.12
Variance 0			0.11	0.01	-1.80			-0.03	10.58
Variance 1			0.02	0.01	-3.73			-0.00	9.87
Variance 2			0.01	0.00	3.03			-0.03	10.02

Notes

Sampled at 1050. Sunny, 80s. Transducer in well.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 16:16:59

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	Pond 3	Tubing Diameter	.26 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-36	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.016424 L
Well Total Depth	60.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	15:56:09	900.01	21.10	5.59	247.73	1.87	--	1.00	120.62
Last 5	16:01:09	1200.01	20.93	5.56	242.38	1.53	--	0.79	120.92
Last 5	16:06:09	1500.00	20.92	5.57	240.74	1.68	--	0.74	119.21
Last 5	16:11:09	1799.99	20.80	5.56	241.06	1.88	--	0.74	119.23
Last 5	16:16:09	2099.99	20.75	5.56	241.36	1.80	--	0.73	118.40
Variance 0			-0.00	0.02	-1.64			-0.05	-1.72
Variance 1			-0.13	-0.01	0.31			-0.00	0.03
Variance 2			-0.04	-0.00	0.30			-0.00	-0.84

Notes

Sampled at 16:16. Sunny, 70’s. Transducer in well. Unable to get WLs.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 11:17:16

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	50 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	45 ft

Well Information:		Pumping Information:	
Well ID	YGWC-38	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.8726366 L
Well Total Depth	50.12 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	0 in
Depth to Water	ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	10:56:16	600.02	18.24	4.79	1259.56	2.64	--	2.19	102.84
Last 5	11:01:16	900.01	18.26	4.79	1254.56	1.77	--	2.13	102.38
Last 5	11:06:16	1200.00	18.26	4.81	1258.27	1.54	--	2.10	102.31
Last 5	11:11:17	1501.00	18.30	4.80	1259.74	1.31	--	2.14	102.04
Last 5	11:16:17	1800.99	18.29	4.80	1260.45	1.22	--	2.09	101.81
Variance 0			-0.00	0.02	3.70			-0.02	-0.07
Variance 1			0.04	-0.01	1.47			0.04	-0.26
Variance 2			-0.00	0.00	0.71			-0.06	-0.24

Notes

Sampled at 11:16. Cloudy, 70's. Transducer in well. Unable to get WL readings. FB-1 here.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 14:03:11

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	QED
Company Name	ACC	Tubing Type	poly
Project Name	R6	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	67 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	643819		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	62 ft

Well Information:		Pumping Information:	
Well ID	YGWC-41	Final Pumping Rate	140 mL/min
Well diameter	2 in	Total System Volume	0.6890493 L
Well Total Depth	67.70 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	9 in
Depth to Water	28.87 ft	Total Volume Pumped	14.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	13:42:32	3300.97	18.81	4.86	583.69	0.96	29.60	4.47	92.36
Last 5	13:47:32	3600.96	18.79	4.86	583.30	1.01	29.60	4.61	92.48
Last 5	13:52:32	3900.95	18.85	4.86	583.50	0.86	29.60	4.71	92.43
Last 5	13:57:32	4200.95	18.80	4.86	581.80	1.22	29.60	4.80	92.53
Last 5	14:02:32	4500.94	18.79	4.86	578.39	1.03	29.60	4.94	92.74
Variance 0			0.05	0.00	0.20			0.10	-0.05
Variance 1			-0.05	-0.00	-1.70			0.09	0.10
Variance 2			-0.00	-0.00	-3.41			0.14	0.21

Notes

Sampled at 14:02. Cloudy, 80’s.

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 13:56:55

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	60 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	55 ft

Well Information:		Pumping Information:	
Well ID	YGWC-42	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	1.064164 L
Well Total Depth	60.0 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	29 in
Depth to Water	30.0 ft	Total Volume Pumped	9.8 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:33:18	2399.97	19.85	5.51	1269.37	3.81	32.30	1.27	116.53
Last 5	13:38:18	2699.96	18.73	5.50	1307.29	3.72	32.30	1.39	115.74
Last 5	13:43:18	2999.96	20.92	5.50	1242.56	3.67	32.40	1.29	115.40
Last 5	13:48:18	3299.94	21.55	5.50	1246.58	3.59	32.40	1.34	114.49
Last 5	13:53:18	3599.93	19.84	5.50	1293.22	3.38	32.40	1.44	113.87
Variance 0			2.19	-0.00	-64.73			-0.11	-0.34
Variance 1			0.63	-0.00	4.03			0.05	-0.90
Variance 2			-1.71	-0.00	46.64			0.10	-0.63

Notes

Sampled at 13:55. Cloudy 70s. EB 1 here at 13:00 - gloves

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-09 12:11:24

Project Information:		Pump Information:	
Operator Name	Chris Parker	Pump Model/Type	Bladder Pump
Company Name	Atlantic Coast Consulting	Tubing Type	Poly
Project Name	R6	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	80 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	466058		
Turbidity Make/Model	Hach 2100 Q	Pump placement from TOC	75 ft

Well Information:		Pumping Information:	
Well ID	YGWC-43	Final Pumping Rate	200 mL/min
Well diameter	2 in	Total System Volume	1.257218 L
Well Total Depth	80.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	2 in
Depth to Water	17.18 ft	Total Volume Pumped	7 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	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	11:46:57	300.02	20.05	6.18	431.04	5.84	17.20	0.63	12.03
Last 5	11:51:57	600.01	20.82	5.74	555.54	5.02	17.30	0.32	47.44
Last 5	11:56:57	900.00	19.96	5.76	589.69	4.38	17.30	0.15	47.52
Last 5	12:01:57	1200.00	20.71	5.77	588.23	3.40	17.40	0.07	46.02
Last 5	12:06:57	1499.99	21.05	5.78	596.18	3.12	17.40	0.06	44.91
Variance 0			-0.85	0.02	34.15			-0.17	0.07
Variance 1			0.75	0.01	-1.46			-0.09	-1.49
Variance 2			0.34	0.01	7.95			-0.00	-1.11

Notes

Sampled at 12:10. Cloudy 70s

Grab Samples

Product Name: Low-Flow System

Date: 2019-10-10 16:36:55

Project Information:		Pump Information:	
Operator Name	Taylor Goble	Pump Model/Type	Bladder Pump
Company Name	ACC	Tubing Type	Poly
Project Name	Pond 3	Tubing Diameter	.25 in
Site Name	Plant Yates	Tubing Length	79 ft
Latitude	0º 0' 0"		
Longitude	0º 0' 0"		
Sonde SN	613229		
Turbidity Make/Model	HACH	Pump placement from TOC	74 ft

Well Information:		Pumping Information:	
Well ID	YGWC-49	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.8525658 L
Well Total Depth	79.00 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	10 in
Depth to Water	31.90 ft	Total Volume Pumped	6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 25
Last 5	16:15:20	900.02	21.73	5.78	242.81	0.77	32.44	3.14	31.00
Last 5	16:20:20	1200.02	21.73	5.70	243.13	0.63	32.50	3.00	30.79
Last 5	16:25:20	1500.02	21.57	5.74	242.38	0.58	32.62	2.79	27.26
Last 5	16:30:20	1800.02	21.60	5.68	243.12	0.61	32.69	2.77	27.03
Last 5	16:35:21	2100.66	21.46	5.72	242.91	0.54	32.77	2.63	23.72
Variance 0			-0.16	0.04	-0.75			-0.21	-3.53
Variance 1			0.03	-0.06	0.74			-0.02	-0.22
Variance 2			-0.14	0.04	-0.21			-0.14	-3.32

Notes

Sampled at 1635. Sunny 82 degrees

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

Draft Attorney Client Privilege

December 11, 2019

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on December 09, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Rebecca Thornton, Pace Analytical Atlanta

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Draft Attorney Client Privilege

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

Pace Analytical Services Atlanta
110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

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Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2626582001	**YAMW-1**	Water	12/09/19 13:28	12/09/19 15:55

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

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Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2626582001	**YAMW-1**	EPA 6020B	CSW	1

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

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Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

Sample: YAMW-1 **Lab ID: 2626582001** Collected: 12/09/19 13:28 Received: 12/09/19 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Cobalt	**0.031**	mg/L	0.0050	0.00030	1	12/10/19 17:59	12/11/19 13:15	7440-48-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Draft Attorney Client Privilege

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

QC Batch: 40280
QC Batch Method: EPA 3005A
Associated Lab Samples: 2626582001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 183080 Matrix: Water
Associated Lab Samples: 2626582001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cobalt	mg/L	ND	0.0050	0.00030	12/11/19 13:04	

LABORATORY CONTROL SAMPLE: 183081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.1	0.10	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 183082 183083

Parameter	Units	2626582001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	0.031	0.1	0.1	0.13	0.13	102	103	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Draft Attorney Client Privilege

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Draft Attorney Client Privilege

Project: Plant Yates-Ash Pond 3
Pace Project No.: 2626582

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2626582001	**YAMW-1**	EPA 3005A	40280	EPA 6020B	40282

CHAIN OF CUSTODY RECORD

Pace Analytical®

Pace Analytical Services, Inc.
110 TECHNOLOGY PARKWAY, PEACHTREE CORNERS, GA 3
(770) 734-4200 : FAX (770) 734-4201

WO# : 2626582

2626582

CLIENT NAME: Georgia Power
Georgia Power

CLIENT ADDRESS/PHONE NUMBER/FAX NUMBER:
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239

REPORT TO: Joju Abraham

CC:

REQUESTED COMPLETION DATE:

PO #:

PROJECT NAME/STATE: Plant Yates - Ash Pond 3

PROJECT #:

ANALYSIS REQUESTED

Collection DATE	Collection TIME	MATRIX CODE*	COMP	GRAB	SAMPLE IDENTIFICATION	# of CONTAINERS	Metals App. IV (EPA 6020) Cobalt
CONTAINER TYPE:							P
PRESERVATION:							3
12/9/19	1328	GW		X	YAMW-1	1	✓

SAMPLE ID NUMBER

P - PLASTIC — 1 - HCl, ≤6°C
A - AMBER GLASS — 2 - H_2SO_4, ≤6°C
G - CLEAR GLASS — 3 - HNO_3
V - VOA VIAL — 4 - NaOH, ≤6°C
S - STERILE — 5 - NaOH/ZnAc, ≤6°C
O - OTHER — 6 - $Na_2S_2O_3$, ≤6°C
7 - ≤6°C not frozen

*MATRIX CODES:

DW - DRINKING WATER — S - SOIL
WW - WASTEWATER — SL - SLUDGE
GW - GROUNDWATER — SB - SOLID
SW - SURFACE WATER — A - AIR
ST - STORM WATER — L - LIQUID
W - WATER — P - PRODUCT

REMARKS/ADDITIONAL INFORMATION

Cobalt only

SAMPLED BY AND TITLE: Ryan Walker ACC — DATE/TIME: 12/9/19 1328

RELINQUISHED BY: — DATE/TIME: 12/9/19 1555

RECEIVED BY: W. Winston ITACE — DATE/TIME: 12/9/19 1555

RELINQUISHED BY: — DATE/TIME:

RECEIVED BY LAB: — DATE/TIME:

SAMPLE SHIPPED VIA: UPS FED-EX USPS COURIER CLIENT OTHER FS

pH checked: Yes No NA

Ice: Yes No NA

Temperature: Min: 0.2 Max:

Custody Seal: Intact Broken Not Present

# of Coolers: 1

Cooler ID:

FOR LAB USE ONLY

LAB #:

Entered into LIMS:

Tracking #:

OT JO OT 10P

Pace Analytical

Client Name: Georgia Power

WO#: 2626582

PM: KH Due Date: 12/16/19

CLIENT: GAPower-CCR

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace Other

Tracking #: _____

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Thermometer Used: THR083 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: KW 12/9/19

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: GW		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed 12.10.19 Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

3000 W28

Project Manager Review: _____ **Date:** _____

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

Product Name: Low-Flow System

Date: 2019-12-09 13:29:07

Project Information:		Pump Information:	
Operator Name	Ryan Walker	Pump Model/Type	Peristaltic pump
Company Name	ACC	Tubing Type	poly
Project Name	Plant Yates	Tubing Diameter	.17 in
Site Name	Plant Yates AP3	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	573204		
Turbidity Make/Model	Hach 2100Q	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	YAMW-1	Final Pumping Rate	150 mL/min
Well diameter	2 in	Total System Volume	0.4024396 L
Well Total Depth	70.53 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	26 in
Depth to Water	14.40 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			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 0.3	+/- 10
Last 5	13:08:06	1800.01	17.84	5.99	181.94	3.69	16.60	2.95	148.98
Last 5	13:13:07	2101.00	17.91	5.94	181.42	4.00	16.70	2.95	148.10
Last 5	13:18:08	2402.00	18.01	5.91	180.74	4.01	16.80	2.93	148.35
Last 5	13:23:11	2704.99	18.10	5.88	180.20	4.07	16.80	2.92	148.10
Last 5	13:28:11	3004.99	18.06	5.87	179.10	3.87	16.80	2.91	148.25
Variance 0			0.10	-0.04	-0.67			-0.02	0.25
Variance 1			0.09	-0.03	-0.54			-0.01	-0.25
Variance 2			-0.03	-0.01	-1.10			-0.01	0.15

Notes

Sampled at 13:28 on 12-9-19. Cloudy, 50's.

Grab Samples

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

Draft Attorney Client Privilege

January 08, 2020

Joju Abraham
Georgia Power - Coal Combustion Residuals
2480 Maner Road
Atlanta, GA 30339

RE: Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

Dear Joju Abraham:
Enclosed are the analytical results for sample(s) received by the laboratory on January 03, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Herring
kevin.herring@pacelabs.com
(704)875-9092
HORIZON Database Administrator

Enclosures

cc: Kristen Jurinko
Matt Malone, Atlantic Coast Consulting
Betsy McDaniel, Atlantic Coast Consulting
Chris Parker, Atlantic Coast Consulting
Evan Perry, Atlantic Coast Consulting
Lauren Petty, Southern Company Services, Inc.
Ryan Walker

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

CERTIFICATIONS

Draft Attorney Client Privilege

Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

Pace Analytical Services Atlanta

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

SAMPLE SUMMARY

Draft Attorney Client Privilege

Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2627458001	**YAMW-1**	Water	01/03/20 11:23	01/03/20 14:22

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Peachtree Corners, GA 30092
(770)734-4200

SAMPLE ANALYTE COUNT

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Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2627458001	**YAMW-1**	EPA 6020B	CSW	1

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

ANALYTICAL RESULTS

Draft Attorney Client Privilege

Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

Sample: YAMW-1 **Lab ID: 2627458001** Collected: 01/03/20 11:23 Received: 01/03/20 14:22 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B		Preparation Method: EPA 3005A					
Cobalt	ND	mg/L	0.0050	1	01/07/20 13:32	01/07/20 18:35	7440-48-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA

Draft Attorney Client Privilege

Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

QC Batch: 41623
QC Batch Method: EPA 3005A
Associated Lab Samples: 2627458001

Analysis Method: EPA 6020B
Analysis Description: 6020B MET

METHOD BLANK: 189239 Matrix: Water
Associated Lab Samples: 2627458001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	ND	0.0050	01/07/20 18:23	

LABORATORY CONTROL SAMPLE: 189240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 189241 189242

Parameter	Units	2627458001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	100	98	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALIFIERS

Draft Attorney Client Privilege

Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092
(770)734-4200

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Draft Attorney Client Privilege

Project: Plant Yates - Newnan/GA
Pace Project No.: 2627458

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2627458001	**YAMW-1**	EPA 3005A	41623	EPA 6020B	41638

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 2627458

2627458

LAB USE ... mber or

Company: Atlantic Coast Consulting	Billing Information:
Address: 1150 Northmeadow Parkway	
Report To: ~~eperry@~~ evan.perry@atlcc.net	Email To: evan.perry@atlcc.net
Copy To:	Site Collection Info/Address: Plant Yates
Customer Project Name/Number: Plant Yates	State: GA / County/City: Newnan / Time Zone Collected: [ ]PT [ ]MT [ ]CT [✓]ET
Phone: / Email:	Site/Facility ID #: / Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Taylor Goble	Purchase Order #: / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature): Taylor Goble	Turnaround Date Required: / Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) / Field Filtered (if applicable): [ ] Yes [X] No / Analysis: ____

Container Preservative Type ... | Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: ____			
Sample pH Acceptable	Y	N	NA
pH Strips: ____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: ____			

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Cobalt only
YAMW-1	GW	G	1-3-20	1123	—	—	—	1	X

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2399936

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: IR214
Cooler 1 Temp Upon Receipt: 2.2 oC
Cooler 1 Therm Corr. Factor: ____ oC
Cooler 1 Corrected Temp: ____ oC
Comments:

Relinquished by/Company: (Signature) Taylor Goble/ACC	Date/Time: 1-3-20/	Received by/Company: (Signature) /Pace	Date/Time: 1/3/20 14:22
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

Page 9 of 9

Draft Attorney Client Privilege

Product Name: Low-Flow System

Date: 2020-01-03 11:23:57

Project Information:		Pump Information:	
Operator Name	Taylor Goble	Pump Model/Type	Peri Pump
Company Name	ACC	Tubing Type	poly
Project Name	Ash Pond 3	Tubing Diameter	.17 in
Site Name	Plant Yates	Tubing Length	70 ft
Latitude	0° 0' 0"		
Longitude	0° 0' 0"		
Sonde SN	573204		
Turbidity Make/Model	HACH 2100Q	Pump placement from TOC	65 ft

Well Information:		Pumping Information:	
Well ID	YAMW-1	Final Pumping Rate	130 mL/min
Well diameter	2 in	Total System Volume	0.4024396 L
Well Total Depth	70.52 ft	Calculated Sample Rate	300 sec
Screen Length	10 ft	Stabilization Drawdown	25 in
Depth to Water	13.01 ft	Total Volume Pumped	4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 25
Last 5	11:02:58	900.01	19.03	5.81	192.43	3.32	14.96	3.67	135.09
Last 5	11:07:58	1200.01	18.97	5.80	190.72	2.65	15.10	3.06	135.62
Last 5	11:12:58	1500.02	18.97	5.78	189.93	2.61	15.10	2.59	136.18
Last 5	11:17:58	1800.02	18.98	5.79	189.44	2.65	15.10	2.54	136.07
Last 5	11:22:58	2100.01	18.94	5.78	190.02	2.40	15.10	2.51	136.93
Variance 0			-0.00	-0.02	-0.78			-0.47	0.56
Variance 1			0.01	0.00	-0.49			-0.05	-0.11
Variance 2			-0.04	-0.01	0.57			-0.02	0.86

Notes

Sampled 1123 rainy 62 degrees

Grab Samples

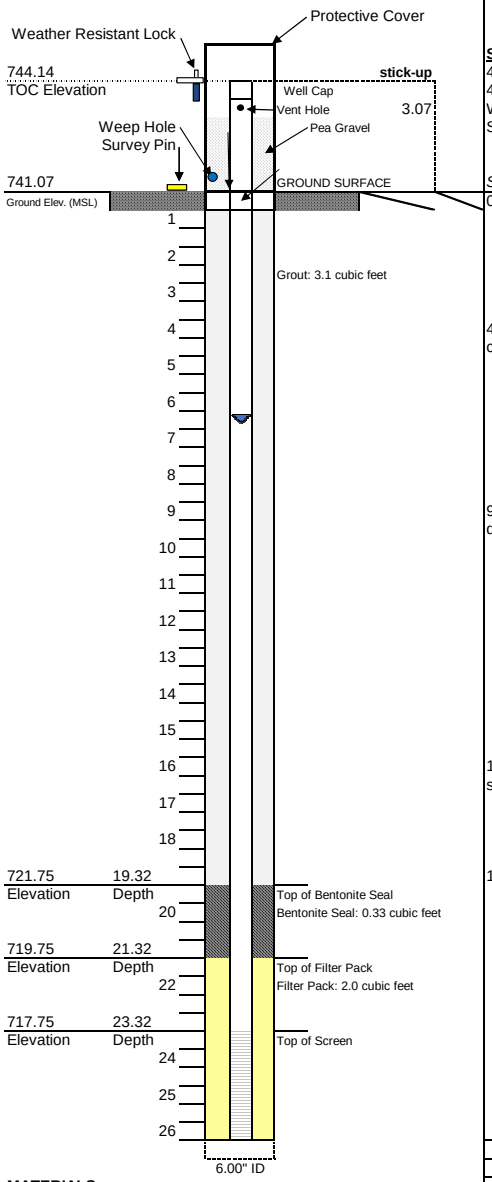
APPENDIX B – BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

ATLANTIC COAST CONSULTING, INC.

PZ-51

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	36.69 ft. BTOC	**SITE LOCATION**	Newnan, Georgia
DATE BEGIN:	7-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	8-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	7' BGS		
WATER AFTER 48 HOURS:	6.27' BGS		



Northing: 1257595.674
Easting: 2073181.552

SURFACE COMPLETION:
4"x4" Aluminum Protective Casing
4'x4'x4" Concrete Pad
Weather Resistant Lock
Survey Pin

SOIL DESCRIPTION

0-4' Hydrovac. No observable cuttings

4-9' Hard rock. Gniessic banding/schist. Moderately weathered to competent. Some iron staining present (5/5)

9-16' As above except very competent rock. No iron staining. Very hard drilling (5/7)

16-19' As above except rock now slightly weathered and some iron staining present (2/3)

19-29' As above except now more iron staining present (6/10)

Core Photos

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex

Soil Descriptions from Unified Soil Classification System

BTOC - Below Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

PZ-51

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	36.69 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	7-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	8-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	7' BGS		
WATER AFTER 48 HOURS:	6.27' BGS		

Core Photos

Elevation MSL	Depth BGS	
	28	
	29	29-33' As above except rock now very competent. No iron staining present. Very hard drilling (4/4)
	30	
	31	
	32	
707.45	33.00	Bottom of Screen
Elevation	Depth	Silt Trap (0.3')
	34	
	35	
	36	
	37	
	38	
	39	
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	
	50	
	51	
	52	

Total well depth 33.62' BGS

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

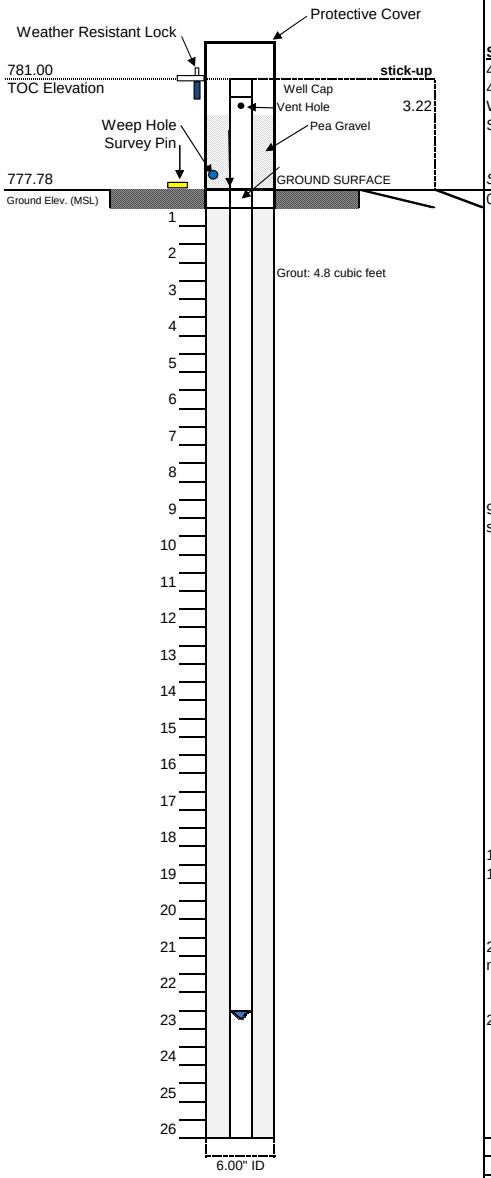
TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-2

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	46.86 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	11-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	12-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	20' BGS		
WATER AFTER 48 HOURS:	22.72' BGS		



Northing: 1256781.989
Easting: 2072924.236

SURFACE COMPLETION:
4"x4" Aluminum Protective Casing
4'x4'x4" Concrete Pad
Weather Resistant Lock
Survey Pin

SOIL DESCRIPTION

0-10' Hydrovac. No observable cuttings

9-19' Dark reddish brown to white/tan/pale brown. Silty sand (SC) with some silt and clays, moist to dry, soft, some saprolite. (10/10)

19-29' (10/10)
19-21' As above except mostly sand.

21-23' Mostly silt, brown, moist, medium dense, slight plasticity and micaceous.

23-29' Moslty sand (SC) brown to tan, slightly moist, some saprolite.

Core Photos

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex

Soil Descriptions from Unified Soil Classification System

BTOC - Below Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-2

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	46.86 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	11-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	12-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	20' BGS		
WATER AFTER 48 HOURS:	22.72' BGS		

Core Photos

Elevation MSL	Depth BGS	
	28	
748.44	29.34	29-39' Harder drilling. No recovery (0/10)
Elevation	Depth	Top of Bentonite Seal
	30	Bentonite Seal: 0.33 cubic feet
746.44	31.34	
Elevation	Depth	Top of Filter Pack
	32	Filter Pack: 2.0 cubic feet
744.44	33.34	
Elevation	Depth	Top of Screen
	34	
	35	
	36	
	37	
	38	
	39	39-43' Hard rock gneissic banding/schist. Some garnet. Iron staining present (4/4)
	40	
	41	
	42	
734.14	43.34	Bottom of Screen — Total well depth 43.64' BGS
Elevation	Depth	Silt Trap (0.3')
	44	
	45	
	46	
	47	
	48	
	49	
	50	
	51	
	52	

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

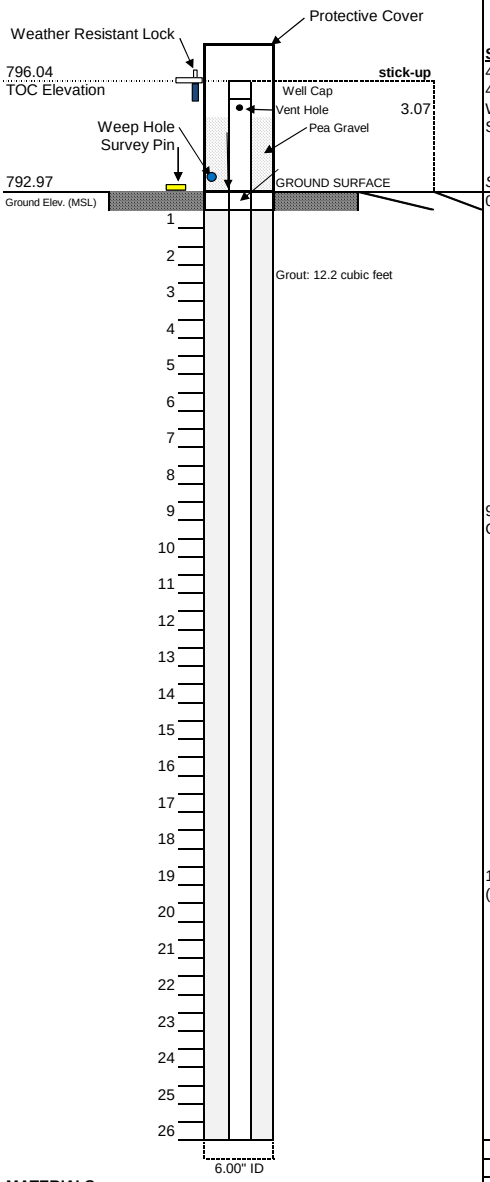
TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-3

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	91.96 ft. BTOC	**SITE LOCATION**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	6-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	34.44' BGS		



Northing: 1256915.014
Easting: 2073344.309

SURFACE COMPLETION:
4"x4" Aluminum Protective Casing
4'x4'x4" Concrete Pad
Weather Resistant Lock
Survey Pin

SOIL DESCRIPTION	Core Photos
0-9' Hydrovac. No observable cuttings	
9-19' Dark to pale brown silty sand. Dry, soft with some clay and gravel Gravel is friable and medium to highly weathered	
	
19-29' As above-tan to medium brown, some hard gravel pieces (10/10)	

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex

Soil Descriptions from Unified Soil Classification System

BTOC - Below Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-3

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	91.96 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	6-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	34.44' BGS		

Core Photos

Elevation MSL	Depth BGS	
	28	
	29	29-39' Hard rock-metamorphic gneiss banding/schist, fractured core iron staining (4.5/10)
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	39-49' As above (4.5/10)
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	49-59' As above-less fractured rock (8/10)
	50	
	51	
	52	

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-3

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	91.96 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	6-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	34.44' BGS		

Core Photos

Elevation MSL	Depth BGS	
	54	
	55	
	56	
	57	
	58	
	59	59-69' As above, large rock pieces/less fractures No iron staining (5/10)
	60	
	61	
	62	
	63	
	64	
	65	
	66	
	67	
	68	
	69	69-79' (10/10) 72-74' more fractured than previous 74-79' lots of iron staining. Some quartzite.
	70	
	71	
	72	
	73	
	74	
718.38	74.59	Top of Bentonite Seal
Elevation	Depth	Bentonite Seal: 0.33 cubic feet
	76	
716.38	76.59	Top of Filter Pack
Elevation	Depth	Filter Pack: 2.0 cubic feet
	78	

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-3

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	91.96 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	6-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	34.44' BGS		

Core Photos

Elevation	Depth	
714.38	78.59	Top of Screen
	80	
	81	
	82	
	83	
	84	
	85	
	86	
	87	
	88	
704.08	88.59	Bottom of Screen
		Silt Trap (0.3')
	90	
	91	
	92	
	93	
	94	
	95	
	96	
	97	
	98	
	99	
	100	
	101	
	102	
	103	
	104	

6.00" OD

79-88' As above. Iron staining stops at ~81'

Total well depth 88.89' BGS

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

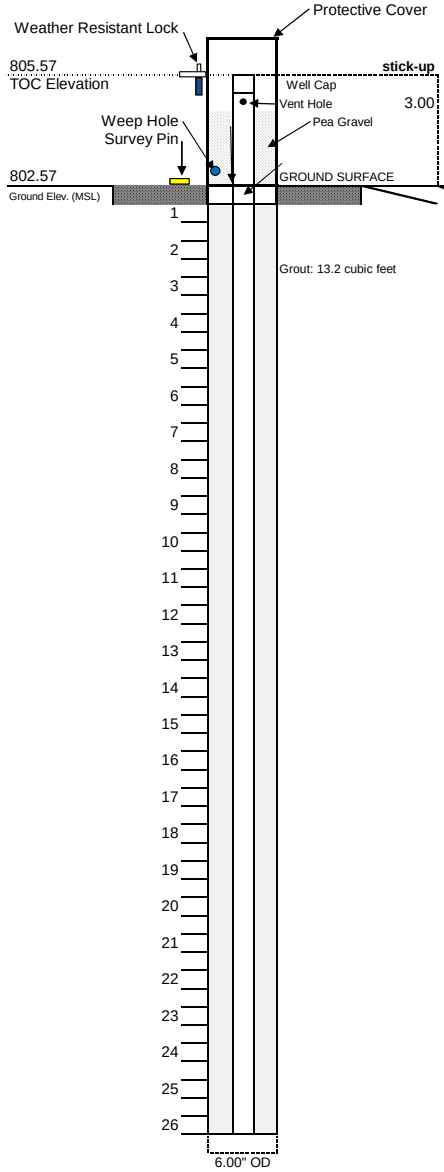
TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-4

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	96.86 ft. BTOC	**SITE LOCATION**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	7-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	30.68' BGS		



Northing: 1256532.778
Easting: 2073281.792

SURFACE COMPLETION:
4"x4" Aluminum Protective Casing
4'x4'x4" Concrete Pad
Weather Resistant Lock
Survey Pin

SOIL DESCRIPTION	Core Photos
0-10' Hydrovac. No observable cuttings	
10-20' Brown to pale brown sandy silt with some clay and some gravel Dry, soft, slightly micaceous, low plasticity, medium to highly weathered saprolite. Friable. (10/10)	
20-30' As above-slightly harder weathered rock at 20-21'-still friable Very sandy layer at 24-25' (10/10)	

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Campbell Monoflex

Soil Descriptions from Unified Soil Classification System

BTOC - Below Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-4

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	96.86 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	7-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	30.68' BGS		

Core Photos

Elevation MSL	Depth BGS	
	28	
	29	
	30	30-35' Mostly sand silt with 10% gravel-hard to friable
	31	35-37' Clayey sand-high to medium plasticity 37-40' Return to silty sand with medium to highly weathered rock. Micaceous
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	40-44' As above (5/5)
	41	
	42	
	43	
	44	
	45	45-49' Hard rock. Metamorphic gneiss banding/schist. Iron staining present. 44-45' Moderately hard, somewhat friable. (5/5)
	46	
	47	
	48	
	49	49-59' As above, moderately weathered, somewhat friable, iron staining present (2/10)
	50	
	51	
	52	

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-4

BORING ID

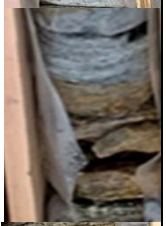
PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	96.86 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	7-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	30.68' BGS		

Core Photos

Elevation MSL	Depth BGS	
54	54	
55	55	
56	56	
57	57	
58	58	
59	59	59-69' As above except less weathered rock, non friable. Still some iron staining present (8/10)
60	60	
61	61	
62	62	
63	63	
64	64	
65	65	
66	66	
67	67	
68	68	
69	69	69-79' As aboveexcept rock is more weathered. Section of quartzite at 73-74'. Iron staining ends at 77'. (7/10)
70	70	
71	71	
72	72	
73	73	
74	74	
75	75	
76	76	
77	77	
78	78	

6.00" OD






MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

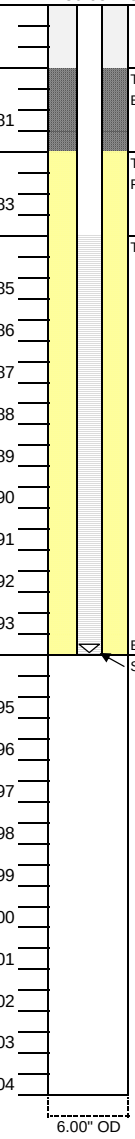
TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-4

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	96.86 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	5-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	7-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	30' BGS		
WATER AFTER 48 HOURS:	30.68' BGS		



79-89' Very competent rock with some fracturing at 84-85' and 88-89'. Iron staining at 88-89'

89-94' Fractures and iron staining from 89-90' and 93-94'. Some slight iron staining from 90-93' but mostly solid core.

Total well depth 93.86' BGS

Core Photos

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

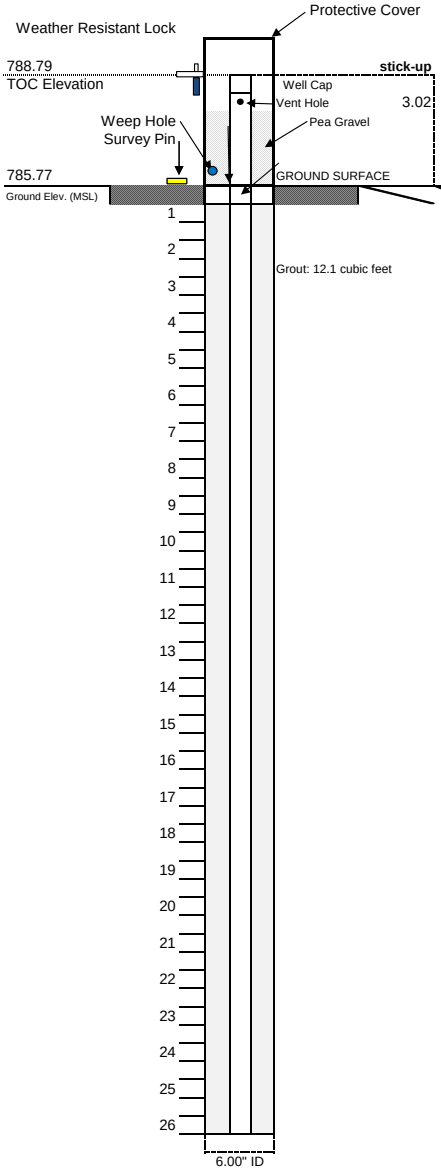
TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-5

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	90.66 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	12-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	13-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	35' BGS		
WATER AFTER 48 HOURS:	11.21' BGS		



Northing: 1256139.572
Easting: 2074487.493

SURFACE COMPLETION:
4"x4" Aluminum Protective Casing
4'x4'x4" Concrete Pad
Weather Resistant Lock
Survey Pin

SOIL DESCRIPTION

0-10' Hydrovac. No observable cuttings

9-19' tan to pale brown. Silty sand (SC) with some silt and clays, moist to dry, soft, some saprolite. (10/10)

19-29' As above (9/10).

Core Photos

MATERIALS:

GROUT:		Bentonite Grout
MANUFACTURER:		AquaGuard
BENTONITE SEAL:		3/8" Bentonite Pellets
MANUFACTURER:		Pel-Plug
FILTER PACK SAND:		20/30 Mesh
MANUFACTURER:		Filter Media
WELL SCREEN:		Sch. 40 - 2" PVC
MANUFACTURER:		Campbell Monoflex
SLOT SIZE:		0.010-Inch Slot
WELL CASING:		Sch. 40 - 2" PVC
MANUFACTURER:		Campbell Monoflex

Soil Descriptions from Unified Soil Classification System

BTOC - Below Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-5

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	90.66 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	12-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	13-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	35' BGS		
WATER AFTER 48 HOURS:	11.21' BGS		

Core Photos

Elevation MSL	Depth BGS	
	28	
	29	29-39' Harder drilling. Gniessic banding with schist. Iron and manganese staining. Some fractures present.
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	39-49' As above except no iron staining (7/10)
	40	
	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
	49	49-59' As above (8/10)
	50	
	51	
	52	

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-5

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	90.66 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	12-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	13-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	35' BGS		
WATER AFTER 48 HOURS:	11.21' BGS		

Core Photos

Elevation MSL	Depth BGS	
	54	
	55	
	56	
	57	
	58	
	59	59-69' As above except more competent rock. Iron staining and fractures present (6/10)
	60	
	61	
	62	
	63	
	64	
	65	
	66	
	67	
	68	
	69	69-79' As above except no iron staining (9/10)
	70	
	71	
	72	
712.43	73.34	
Elevation	Depth	Top of Bentonite Seal
	74	Bentonite Seal: 0.33 cubic feet
710.43	75.34	
Elevation	Depth	Top of Filter Pack
	76	Filter Pack: 2.0 cubic feet
708.43	77.34	
Elevation	Depth	Top of Screen
	78	

6.00" OD

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

ATLANTIC COAST CONSULTING, INC.

YAMW-5

BORING ID

PROJECT:	Plant Yates	**PROJECT NO.:**	I054-110
TOTAL DEPTH:	90.66 ft. BTOC	**SITE LOCATION:**	Newnan, Georgia
DATE BEGIN:	12-Nov-2019	**DRILLER:**	Isaac Young
DATE COMPLETE:	13-Nov-2019	**RIG TYPE:**	T-300 Rotosonic
INSTALLED BY:	Cascade	**METHOD:**	Rotosonic
SUPERVISED BY:	Ryan Walker		
WATER 1ST ENCOUNTERED:	35' BGS		
WATER AFTER 48 HOURS:	11.21' BGS		

Core Photos

Elevation MSL	Depth BGS
	80
	81
	82
	83
	84
	85
	86
698.13	87.34
Elevation	Depth
	88
	89
	90
	91
	92
	93
	94
	95
	96
	97
	98
	99
	100
	101
	102
	103
	104

Bottom of Screen

Silt Trap (0.3')

6.00" OD

79-87' As above except rock slightly weathered. Iron staining and some fractures present (6/10)

Total well depth 87.64' BGS

MATERIALS:

GROUT:	Bentonite Grout
MANUFACTURER:	AquaGuard
BENTONITE SEAL:	3/8" Bentonite Pellets
MANUFACTURER:	Pel-Plug
FILTER PACK SAND:	20/30 Mesh
MANUFACTURER:	Filter Media
WELL SCREEN:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line
SLOT SIZE:	0.010-Inch Slot
WELL CASING:	Sch. 40 - 2" PVC
MANUFACTURER:	Silver-Line

TOC - Top of Casing
ID - Inside Diameter; OD - Outside Diameter
MSL - Mean Sea Level
BGS - Below Ground Surface

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1150 Northmeadow Pkwy.
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Roswell, GA 30076
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Phone: 912.236.3471

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212 S. Peters Road
Suite 203
Knoxville, TN 37923
Phone: 865.531.9143

APPENDIX C

STATISTICAL ANALYSES

AP-3, B-B` 100% ND

Date: 5/13/2019 2:18 PM

Plant Yates Client: Southern Company Data: Yates AP-3, B-B'

Antimony (mg/L)

YGWC-23S, YGWC-33S

Arsenic (mg/L)

YGWC-23S, YGWC-24S

Cadmium (mg/L)

YGWC-24S

Cobalt (mg/L)

YGWC-23S, YGWC-24S

Lead (mg/L)

YGWC-24S

Lithium (mg/L)

YGWC-24S

Mercury (mg/L)

YGWC-24S, YGWC-33S, YGWC-36

Molybdenum (mg/L)

YGWC-23S, YGWC-24S

Selenium (mg/L)

YGWC-24S

Thallium (mg/L)

YGWC-23S, YGWC-24S, YGWC-36

Tolerance Limit

Plant Yates Client: Southern Company Data: Yates Printed 6/28/2019, 10:46 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.0015	n/a	n/a	n/a	88	93.18	n/a	0.01096	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0025	n/a	n/a	n/a	104	84.62	n/a	0.004822	NP Inter(NDs)
Barium (mg/L)	n/a	0.0294	n/a	n/a	n/a	104	1.923	n/a	0.004822	NP Inter(normal...
Beryllium (mg/L)	n/a	0.0015	n/a	n/a	n/a	104	87.5	n/a	0.004822	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.00125	n/a	n/a	n/a	104	96.15	n/a	0.004822	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.013	n/a	n/a	n/a	104	77.88	n/a	0.004822	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	6.92	n/a	n/a	n/a	104	0	n/a	0.004822	NP Inter(normal...
Fluoride (mg/L)	n/a	0.32	n/a	n/a	n/a	112	87.5	n/a	0.003199	NP Inter(NDs)
Lead (mg/L)	n/a	0.0025	n/a	n/a	n/a	88	93.18	n/a	0.01096	NP Inter(NDs)
Lithium (mg/L)	n/a	0.025	n/a	n/a	n/a	101	25.74	n/a	0.005625	NP Inter(normal...
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	104	90.38	n/a	0.004822	NP Inter(NDs)
Thallium (mg/L)	n/a	-0.0005	n/a	n/a	n/a	89	100	n/a	0.01041	NP Inter(NDs)

Intrawell Prediction Limit

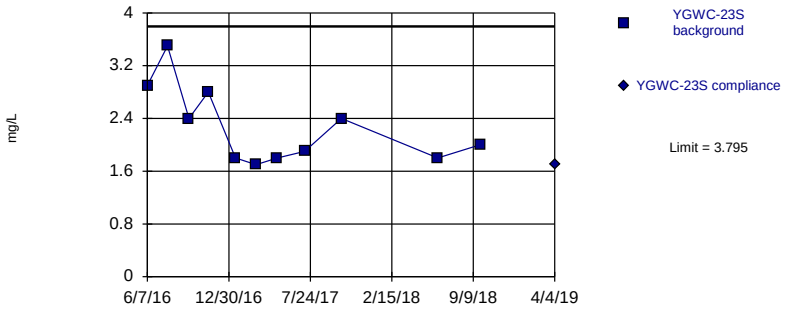
Plant Yates Client: Southern Company Data: Yates Printed 6/28/2019, 9:39 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Trans...	Alpha	Method
Chloride (mg/L)	YGWC-23S	3.795	4/4/2019	1.7	No	11	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWC-24S	7.124	4/4/2019	5.9	No	11	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWC-33S	7.736	4/4/2019	5.8	No	11	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWC-36	7.368	4/4/2019	5.4	No	11	0	No	0.0009403	Param Intra 1 of 2

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.273, Std. Dev.=0.585, n=11. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8639, critical = 0.792. Kappa = 2.602 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/28/2019 9:39 AM View: AP-3, B-B` Intrawell PL

Plant Yates Client: Southern Company Data: Yates

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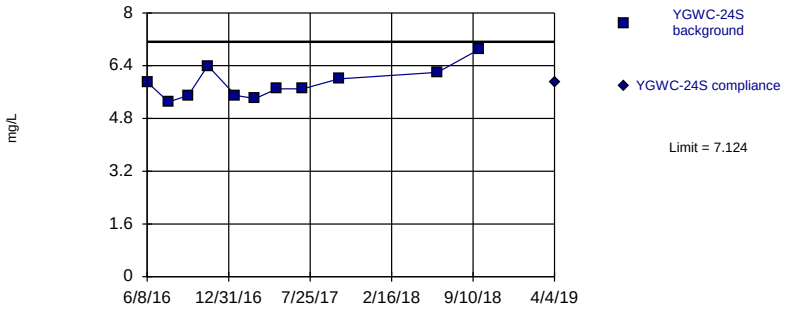
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.864, Std. Dev.=0.4843, n=11. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9228, critical = 0.792. Kappa = 2.602 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/28/2019 9:39 AM View: AP-3, B-B` Intrawell PL

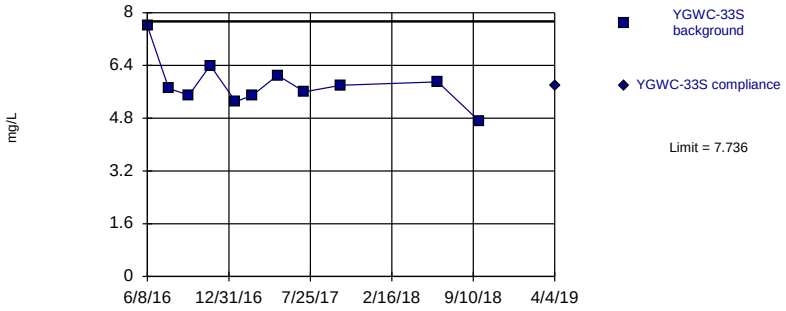
Plant Yates Client: Southern Company Data: Yates

Sanitas™ v.9.5.32 Sanitas software licensed to ACC. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.827, Std. Dev.=0.7336, n=11. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8957, critical = 0.792. Kappa = 2.602 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/28/2019 9:39 AM View: AP-3, B-B` Intrawell PL

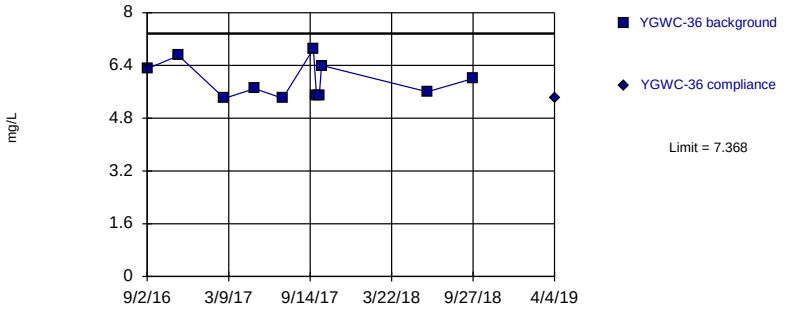
Plant Yates Client: Southern Company Data: Yates

Sanitas™ v.9.5.32 Sanitas software licensed to ACC. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.945, Std. Dev.=0.5466, n=11. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8749, critical = 0.792. Kappa = 2.602 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/28/2019 9:39 AM View: AP-3, B-B` Intrawell PL

Plant Yates Client: Southern Company Data: Yates

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/28/2019 9:40 AM View: AP-3, B-B` Intrawell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-23S
6/7/2016	2.9	
7/28/2016	3.5	
9/20/2016	2.4	
11/8/2016	2.8	
1/16/2017	1.8	
3/9/2017	1.7	
5/2/2017	1.8	
7/10/2017	1.9	
10/11/2017	2.4	
6/12/2018	1.8	
9/27/2018	2	
4/4/2019		1.7

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/28/2019 9:40 AM View: AP-3, B-B` Intrawell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-24S
6/8/2016	5.9	
8/1/2016	5.3	
9/20/2016	5.5	
11/8/2016	6.4	
1/17/2017	5.5	
3/8/2017	5.4	
5/2/2017	5.7	
7/7/2017	5.7	
10/5/2017	6	
6/12/2018	6.2	
9/26/2018	6.9	
4/4/2019		5.9

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/28/2019 9:40 AM View: AP-3, B-B` Intrawell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-33S	YGWC-33S
6/8/2016	7.6	
8/1/2016	5.7	
9/21/2016	5.5	
11/14/2016	6.4	
1/17/2017	5.3	
3/1/2017	5.5	
5/3/2017	6.1	
7/10/2017	5.6	
10/11/2017	5.8	
6/12/2018	5.9	
9/26/2018	4.7	
4/4/2019		5.8

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/28/2019 9:40 AM View: AP-3, B-B` Intrawell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-36	YGWC-36
9/2/2016	6.3	
11/14/2016	6.7	
2/28/2017	5.4	
5/9/2017	5.7	
7/13/2017	5.4	
9/22/2017	6.9	
9/29/2017	5.5	
10/6/2017	5.5	
10/11/2017	6.4	
6/13/2018	5.6	
9/26/2018	6	
4/4/2019		5.4

Interwell Prediction Limit

Plant Yates Client: Southern Company Data: Yates Printed 6/28/2019, 10:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Trans...	Alpha	Method
Boron (mg/L)	**YGWC-23S**	**0.05**	**n/a**	**4/4/2019**	**0.6**	**Yes**	**90**	**53.33**	**n/a**	**0.0002368**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	**YGWC-33S**	**0.05**	**n/a**	**4/4/2019**	**15.4**	**Yes**	**90**	**53.33**	**n/a**	**0.0002368**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	**YGWC-36**	**0.05**	**n/a**	**4/4/2019**	**0.22**	**Yes**	**90**	**53.33**	**n/a**	**0.0002368**	**NP Inter (NDs) 1 of 2**
Calcium (mg/L)	**YGWC-33S**	**37**	**n/a**	**4/4/2019**	**163**	**Yes**	**96**	**0**	**n/a**	**0.0002104**	**NP Inter (normality) 1 of 2**
Fluoride (mg/L)	**YGWC-33S**	**0.32**	**n/a**	**4/4/2019**	**0.57**	**Yes**	**112**	**87.5**	**n/a**	**0.000158**	**NP Inter (NDs) 1 of 2**
pH (S.U.)	**YGWC-33S**	**7.67**	**4.86**	**4/4/2019**	**3.88**	**Yes**	**112**	**0**	**n/a**	**0.000316**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-23S**	**18.27**	**n/a**	**4/4/2019**	**27.9**	**Yes**	**96**	**10.42**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**YGWC-33S**	**18.27**	**n/a**	**4/4/2019**	**847**	**Yes**	**96**	**10.42**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Sulfate (mg/L)	**YGWC-36**	**18.27**	**n/a**	**4/4/2019**	**119**	**Yes**	**96**	**10.42**	**x^(1/3)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-33S**	**189.8**	**n/a**	**4/4/2019**	**1260**	**Yes**	**96**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-36**	**189.8**	**n/a**	**4/4/2019**	**240**	**Yes**	**96**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**

Interwell Prediction Limit

Plant Yates Client: Southern Company Data: Yates Printed 5/13/2019, 2:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**YGWC-23S**	**0.04**	**n/a**	**4/4/2019**	**0.6**	**Yes**	**90**	**53.33**	**n/a**	**0.0002379**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	YGWC-24S	0.04	n/a	4/4/2019	0.04ND	No	90	53.33	n/a	0.0002379	NP Inter (NDs) 1 of 2
Boron (mg/L)	**YGWC-33S**	**0.04**	**n/a**	**4/4/2019**	**15.4**	**Yes**	**90**	**53.33**	**n/a**	**0.0002379**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	**YGWC-36**	**0.04**	**n/a**	**4/4/2019**	**0.22**	**Yes**	**90**	**53.33**	**n/a**	**0.0002379**	**NP Inter (NDs) 1 of 2**
Calcium (mg/L)	YGWC-23S	37	n/a	4/4/2019	3.7	No	96	0	n/a	0.0002113	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-24S	37	n/a	4/4/2019	1.9	No	96	0	n/a	0.0002113	NP Inter (normality) 1 of 2
Calcium (mg/L)	**YGWC-33S**	**37**	**n/a**	**4/4/2019**	**163**	**Yes**	**96**	**0**	**n/a**	**0.0002113**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	YGWC-36	37	n/a	4/4/2019	16.9	No	96	0	n/a	0.0002113	NP Inter (normality) 1 of 2
Fluoride (mg/L)	YGWC-23S	0.32	n/a	4/4/2019	0.049	No	112	87.5	n/a	0.0001585	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-24S	0.32	n/a	4/4/2019	0.033	No	112	87.5	n/a	0.0001585	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	**YGWC-33S**	**0.32**	**n/a**	**4/4/2019**	**0.57**	**Yes**	**112**	**87.5**	**n/a**	**0.0001585**	**NP Inter (NDs) 1 of 2**
Fluoride (mg/L)	YGWC-36	0.32	n/a	4/4/2019	0.043	No	112	87.5	n/a	0.0001585	NP Inter (NDs) 1 of 2
pH (S.U.)	YGWC-23S	7.67	4.86	4/4/2019	5.64	No	112	0	n/a	0.000317	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-24S	7.67	4.86	4/4/2019	5.66	No	112	0	n/a	0.000317	NP Inter (normality) 1 of 2
pH (S.U.)	**YGWC-33S**	**7.67**	**4.86**	**4/4/2019**	**3.88**	**Yes**	**112**	**0**	**n/a**	**0.000317**	**NP Inter (normality) 1 of 2**
pH (S.U.)	YGWC-36	7.67	4.86	4/4/2019	5.74	No	112	0	n/a	0.000317	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**YGWC-23S**	**16.36**	**n/a**	**4/4/2019**	**27.9**	**Yes**	**96**	**10.42**	**x^(1/3)**	**0.00188**	**Param Inter 1 of 2**
Sulfate (mg/L)	YGWC-24S	16.36	n/a	4/4/2019	0.29	No	96	10.42	x^(1/3)	0.00188	Param Inter 1 of 2
Sulfate (mg/L)	**YGWC-33S**	**16.36**	**n/a**	**4/4/2019**	**847**	**Yes**	**96**	**10.42**	**x^(1/3)**	**0.00188**	**Param Inter 1 of 2**
Sulfate (mg/L)	**YGWC-36**	**16.36**	**n/a**	**4/4/2019**	**119**	**Yes**	**96**	**10.42**	**x^(1/3)**	**0.00188**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	YGWC-23S	179.8	n/a	4/4/2019	85	No	96	0	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-24S	179.8	n/a	4/4/2019	63	No	96	0	sqrt(x)	0.00188	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**YGWC-33S**	**179.8**	**n/a**	**4/4/2019**	**1260**	**Yes**	**96**	**0**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-36**	**179.8**	**n/a**	**4/4/2019**	**240**	**Yes**	**96**	**0**	**sqrt(x)**	**0.00188**	**Param Inter 1 of 2**

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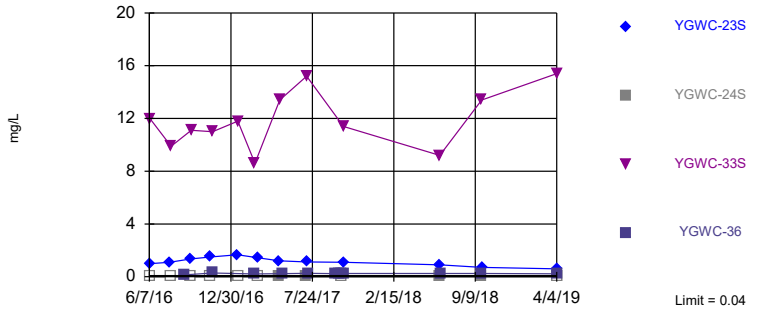
Hollow symbols indicate censored values.

Exceeds Limit: YGWC-23S, YGWC-33S, YGWC-36

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 90 background values. 53.33% NDs. Annual per-constituent alpha = 0.001902. Individual comparison alpha = 0.0002379 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 5/13/2019 2:56 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

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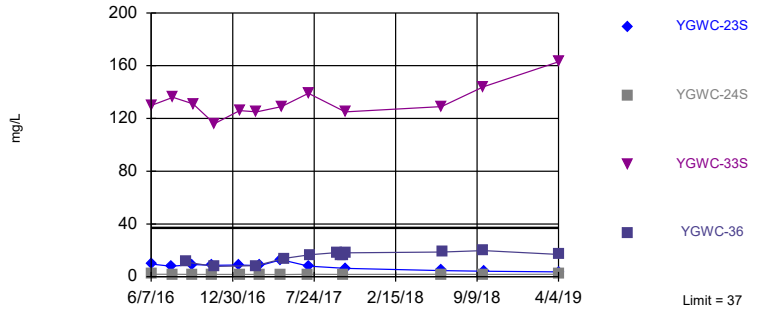
Exceeds Limit: YGWC-33S

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 96 background values. Annual per-constituent alpha = 0.001689. Individual comparison alpha = 0.0002113 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Calcium Analysis Run 5/13/2019 2:56 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

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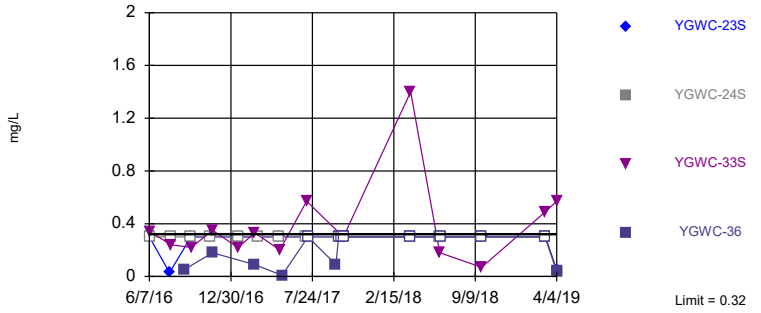
Hollow symbols indicate censored values.

Exceeds Limit: YGWC-33S

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 112 background values. 87.5% NDs. Annual per-constituent alpha = 0.001267. Individual comparison alpha = 0.0001585 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 5/13/2019 2:56 PM View: AP-3, B-B` Interwell PL

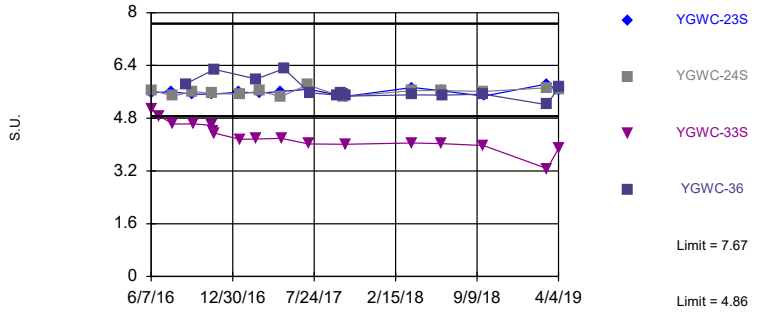
Plant Yates Client: Southern Company Data: Yates

Sanitas™ v.9.6.13 Sanitas software licensed to ACC. UG

Exceeds Limits: YGWC-33S

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 112 background values. Annual per-constituent alpha = 0.002535. Individual comparison alpha = 0.000317 (1 of 2). Comparing 4 points to limit. Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 5/13/2019 2:57 PM View: AP-3, B-B` Interwell PL

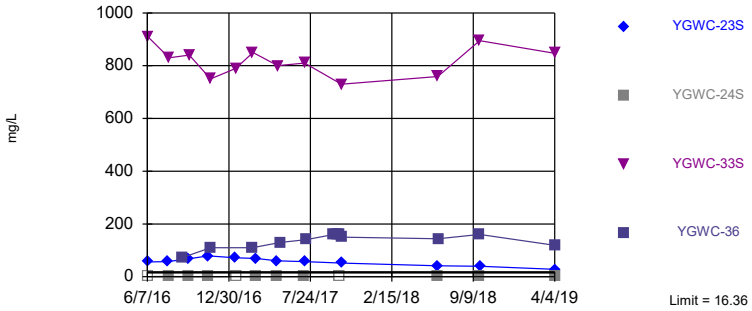
Plant Yates Client: Southern Company Data: Yates

Hollow symbols indicate censored values.

Exceeds Limit: YGWC-23S, YGWC-33S, YGWC-36

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=1.5, Std. Dev.=0.5926, n=96, 10.42% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9692, critical = 0.965. Kappa = 1.752 (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: Sulfate Analysis Run 5/13/2019 2:57 PM View: AP-3, B-B` Interwell PL

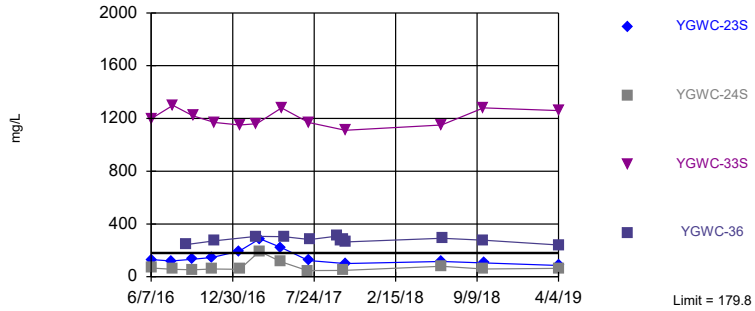
Plant Yates Client: Southern Company Data: Yates

Sanitas™ v.9.6.13 Sanitas software licensed to ACC. UG

Exceeds Limit: YGWC-33S, YGWC-36

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=9.549, Std. Dev.=2.202, n=96. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.98, critical = 0.965. Kappa = 1.752 (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 5/13/2019 2:57 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-5I (bg)	YGWA-4I (bg)	YGWA-18I (bg)	YGWC-23S	YGWA-21I (bg)	YGWA-20S (bg)	YGWC-33S	YGWC-24S	YGWA-5D (bg)
6/2/2016	<0.04	<0.04							<0.05 (o)
6/6/2016			<0.04						
6/7/2016				0.99	<0.04	<0.04			
6/8/2016							12	<0.04	
7/26/2016	<0.04	0.0047 (J)							0.0052 (J)
7/27/2016			<0.04			<0.04			
7/28/2016				1.09	<0.04 (*)				
8/1/2016							9.89	<0.04 (*)	
9/2/2016									
9/14/2016	0.01 (J)	<0.04							0.0071 (J)
9/16/2016									
9/19/2016			<0.04		<0.04	<0.04			
9/20/2016				1.35				<0.04 (*)	
9/21/2016							11.1		
11/2/2016		<0.04				<0.04			<0.1 (o)
11/3/2016			<0.04		<0.04				
11/4/2016	<0.04								
11/8/2016				1.5				<0.04 (*)	
11/14/2016							11		
1/11/2017			<0.04						
1/12/2017	<0.04								0.0076 (J)
1/13/2017		<0.04			<0.04	<0.04			
1/16/2017				1.67					
1/17/2017							11.8	<0.04 (*)	
2/28/2017									
3/1/2017			<0.04				8.61		
3/2/2017									
3/6/2017		<0.04			<0.04	<0.04			
3/7/2017	<0.04								0.0089 (J)
3/8/2017								<0.04	
3/9/2017				1.44					
4/26/2017			<0.04		<0.04	<0.04			
5/1/2017		<0.04							0.0061 (J)
5/2/2017	<0.04			1.2				0.0099 (J)	
5/3/2017							13.4		
5/9/2017									
6/27/2017	<0.04								0.0079 (J)
6/28/2017			<0.04						
6/29/2017		<0.04			<0.04	<0.04			
7/7/2017								0.0076 (J)	
7/10/2017				1.12			15.2		
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017	<0.04				<0.04				0.0094 (J)
10/4/2017						<0.04			
10/5/2017		<0.04	<0.04					<0.04	
10/6/2017									
10/11/2017				1.09			11.4		
6/5/2018					0.0092 (J)				
6/6/2018						0.0049 (J)			0.0098 (J)
6/7/2018	<0.04	0.0045 (J)	<0.04						

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-5I (bg)	YGWA-4I (bg)	YGWA-18I (bg)	YGWC-23S	YGWA-21I (bg)	YGWA-20S (bg)	YGWC-33S	YGWC-24S	YGWA-5D (bg)
6/11/2018									
6/12/2018				0.9			9.2	0.018 (J)	
6/13/2018									
9/25/2018			0.0046 (J)		0.0054 (J)	<0.04			
9/26/2018	0.0057 (J)	0.005 (J)					13.4	0.0055 (J)	0.01 (J)
9/27/2018				0.71					
4/2/2019					0.011 (J)				
4/3/2019	0.0044 (J)	0.0055 (J)	<0.04			<0.04			0.0076 (J)
4/4/2019				0.6			15.4	<0.04	

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-36
6/2/2016			
6/6/2016	<0.05 (o)		
6/7/2016		<0.05 (o)	
6/8/2016			
7/26/2016			
7/27/2016	0.0059 (J)	0.008 (J)	
7/28/2016			
8/1/2016			
9/2/2016			0.133
9/14/2016			
9/16/2016	0.0079 (J)	0.0086 (J)	
9/19/2016			
9/20/2016			
9/21/2016			
11/2/2016			
11/3/2016	0.0082 (J)	0.0077 (J)	
11/4/2016			
11/8/2016			
11/14/2016			0.287
1/11/2017	0.0096 (J)	0.0092 (J)	
1/12/2017			
1/13/2017			
1/16/2017			
1/17/2017			
2/28/2017			0.215
3/1/2017	<0.04 (o)		
3/2/2017		0.0095 (J)	
3/6/2017			
3/7/2017			
3/8/2017			
3/9/2017			
4/26/2017	0.0091 (J)		
5/1/2017			
5/2/2017		<0.04 (o)	
5/3/2017			
5/9/2017			0.233
6/27/2017			
6/28/2017	0.0079 (J)		
6/29/2017		0.0074 (J)	
7/7/2017			
7/10/2017			
7/13/2017			0.262
9/22/2017			0.238
9/29/2017			0.235
10/3/2017			
10/4/2017	0.009 (J)	0.0077 (J)	
10/5/2017			
10/6/2017			0.256
10/11/2017			0.245
6/5/2018			
6/6/2018			
6/7/2018			

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-36
6/11/2018	0.0093 (J)	0.01 (J)	
6/12/2018			
6/13/2018			0.25
9/25/2018	0.007 (J)	0.0096 (J)	
9/26/2018			0.24
9/27/2018			
4/2/2019		0.0066 (J)	
4/3/2019	0.0053 (J)		
4/4/2019			0.22

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWC-23S	YGWA-21I (bg)
6/2/2016	8.8	33	2.4						
6/6/2016				1.4	6.2				
6/7/2016						2.2	2.3	9.6	3.7
6/8/2016									
7/26/2016	7.69	32.3	2.12						
7/27/2016				1.19	4.73	2	2.08		
7/28/2016								7.87	3.15
8/1/2016									
9/2/2016									
9/14/2016	8.49	31	2.18						
9/16/2016				1.5		1.97			
9/19/2016					4.76		1.97		3.17
9/20/2016								9.28	
9/21/2016									
11/2/2016	7.83	30.9					2.13		
11/3/2016				1.31	5.25	1.99			3.4
11/4/2016			2.17 (J)						
11/8/2016								8.6	
11/14/2016									
1/11/2017				1.25	4.74	2.28			
1/12/2017		35.7	2.37						
1/13/2017	8.08						2.45		4.98
1/16/2017								8.85	
1/17/2017									
2/28/2017									
3/1/2017				1.26	5.37				
3/2/2017						2.15			
3/6/2017	8.64						2.48		6.28
3/7/2017		32.7	2.34						
3/8/2017									
3/9/2017								8.4	
4/26/2017				1.05	4.28		2.3		6.65
5/1/2017	13.4	37							
5/2/2017			2.17			1.95		12.9	
5/3/2017									
5/9/2017									
6/27/2017		36.5	2.13						
6/28/2017				1.06	4.95				
6/29/2017	8.81					2.02	2.54		6.04
7/7/2017									
7/10/2017								8.09	
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017		30.9	2.15						8.28
10/4/2017				1.1		2.03	2.25		
10/5/2017	9.29				5.28				
10/6/2017									
10/11/2017								6.36	
6/5/2018									9.1
6/6/2018		26.2					2.3		
6/7/2018	8.2		2.3		4.8				

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWC-23S	YGWA-21I (bg)
6/11/2018				1.4		2.1			
6/12/2018								4.7	
6/13/2018									
9/25/2018				1	4.6	2.1	2.3		10.4 (J)
9/26/2018	9.5 (J)	25.8	2.3						
9/27/2018								4.1	
4/2/2019						2.5			8.8
4/3/2019	8.4	24.7 (J)	2.8	1.2	5.3		2.9		
4/4/2019								3.7	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/2/2016			
6/6/2016			
6/7/2016			
6/8/2016	1.9	130	
7/26/2016			
7/27/2016			
7/28/2016			
8/1/2016	1.83	136	
9/2/2016			11.2
9/14/2016			
9/16/2016			
9/19/2016			
9/20/2016	1.78		
9/21/2016		131	
11/2/2016			
11/3/2016			
11/4/2016			
11/8/2016	1.77		
11/14/2016		116	7.79
1/11/2017			
1/12/2017			
1/13/2017			
1/16/2017			
1/17/2017	1.7	126	
2/28/2017			8.37
3/1/2017		125	
3/2/2017			
3/6/2017			
3/7/2017			
3/8/2017	1.77		
3/9/2017			
4/26/2017			
5/1/2017			
5/2/2017	1.57		
5/3/2017		129	
5/9/2017			13.9
6/27/2017			
6/28/2017			
6/29/2017			
7/7/2017	1.8		
7/10/2017		139	
7/13/2017			16.6
9/22/2017			18.4
9/29/2017			16.1
10/3/2017			
10/4/2017			
10/5/2017	1.7		
10/6/2017			16.6
10/11/2017		125	18.1
6/5/2018			
6/6/2018			
6/7/2018			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/11/2018			
6/12/2018	1.8	129	
6/13/2018			18.7 (J)
9/25/2018			
9/26/2018	1.7	144	19.8 (J)
9/27/2018			
4/2/2019			
4/3/2019			
4/4/2019	1.9	163	16.9 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-20S (bg)	YGWA-17S (bg)
6/2/2016	0.11 (J)	<0.3	<0.3						
6/6/2016				<0.3	<0.3				
6/7/2016						<0.3	<0.3	<0.3	<0.3
6/8/2016									
7/26/2016	0.05 (J)	<0.3	<0.3						
7/27/2016				<0.3	<0.3			<0.3	<0.3
7/28/2016						0.02 (J)	0.03 (J)		
8/1/2016									
9/2/2016									
9/14/2016	0.04 (J)	<0.3	<0.3						
9/16/2016				<0.3					<0.3
9/19/2016					<0.3	0.02 (J)		<0.3	
9/20/2016							<0.3		
9/21/2016									
11/2/2016	<0.3 (*)	<0.3 (*)						<0.3	
11/3/2016				<0.3	<0.3	<0.3 (*)			<0.3
11/4/2016			<0.3						
11/8/2016							<0.3		
11/14/2016									
1/11/2017				<0.3	<0.3				<0.3
1/12/2017	0.04 (J)		<0.3						
1/13/2017		<0.3				<0.3		<0.3	
1/16/2017							<0.3		
1/17/2017									
2/28/2017									
3/1/2017				<0.3 (*)	<0.3 (*)				
3/2/2017									<0.3 (*)
3/6/2017		<0.3 (*)				<0.3 (*)		<0.3 (*)	
3/7/2017	<0.3 (*)		<0.3 (*)						
3/8/2017									
3/9/2017							<0.3 (*)		
4/26/2017				<0.3	<0.3	0.04 (J)		<0.3	
5/1/2017	<0.3 (*)	<0.3							
5/2/2017			<0.3				<0.3		<0.3
5/3/2017									
5/9/2017									
6/27/2017	<0.3 (*)		<0.3						
6/28/2017				<0.3	<0.3				
6/29/2017		<0.3 (*)				<0.3 (*)		<0.3 (*)	<0.3 (*)
7/7/2017									
7/10/2017							<0.3 (*)		
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017	<0.3 (*)		<0.3			<0.3 (*)			
10/4/2017				<0.3				<0.3	<0.3
10/5/2017		<0.3			<0.3				
10/6/2017									
10/11/2017							<0.3		
3/28/2018				<0.3	<0.3				<0.3
3/29/2018	<0.3	<0.3	<0.3			<0.3		<0.3	
3/30/2018							<0.3		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-20S (bg)	YGWA-17S (bg)
6/5/2018						0.13 (J)			
6/6/2018	0.15 (J)							<0.3	
6/7/2018		<0.3	<0.3		<0.3				
6/11/2018				<0.3					<0.3
6/12/2018							<0.3		
6/13/2018									
9/25/2018				<0.3	<0.3	0 (J)		<0.3	<0.3
9/26/2018	<0.3	<0.3	<0.3						
9/27/2018							<0.3		
3/4/2019	0.19 (J)	<0.3	<0.3						
3/5/2019				<0.3		0.32		<0.3	<0.3
3/6/2019					<0.3		<0.3		
4/2/2019						0.12 (J)			<0.3
4/3/2019	0.047 (J)	<0.3	<0.3	<0.3	<0.3			<0.3	
4/4/2019							0.049 (J)		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/2/2016			
6/6/2016			
6/7/2016			
6/8/2016	<0.3	0.34	
7/26/2016			
7/27/2016			
7/28/2016			
8/1/2016	<0.3	0.24 (J)	
9/2/2016			0.05 (J)
9/14/2016			
9/16/2016			
9/19/2016			
9/20/2016	<0.3		
9/21/2016		0.22 (J)	
11/2/2016			
11/3/2016			
11/4/2016			
11/8/2016	<0.3 (*)		
11/14/2016		0.35	0.18 (J)
1/11/2017			
1/12/2017			
1/13/2017			
1/16/2017			
1/17/2017	<0.3	0.22 (J)	
2/28/2017			0.09 (J)
3/1/2017		0.33	
3/2/2017			
3/6/2017			
3/7/2017			
3/8/2017	<0.3 (*)		
3/9/2017			
4/26/2017			
5/1/2017			
5/2/2017	<0.3		
5/3/2017		0.2 (J)	
5/9/2017			0.009 (J)
6/27/2017			
6/28/2017			
6/29/2017			
7/7/2017	<0.3		
7/10/2017		0.57	
7/13/2017			<0.3
9/22/2017			0.09 (J)
9/29/2017			<0.3
10/3/2017			
10/4/2017			
10/5/2017	<0.3		
10/6/2017			<0.3
10/11/2017		<0.3 (*)	<0.3 (*)
3/28/2018			
3/29/2018			
3/30/2018	<0.3	1.4	<0.3

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/5/2018			
6/6/2018			
6/7/2018			
6/11/2018			
6/12/2018	<0.3	0.18 (J)	
6/13/2018			<0.3
9/25/2018			
9/26/2018	<0.3	0.07 (J)	<0.3
9/27/2018			
3/4/2019			
3/5/2019	<0.3		
3/6/2019		0.49	<0.3
4/2/2019			
4/3/2019			
4/4/2019	0.033 (J)	0.57	0.043 (J)

Prediction Limit

Constituent: pH (S.U.) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL
Plant Yates Client: Southern Company Data: Yates

	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-17S (bg)	YGWC-23S	YGWA-21I (bg)	YGWA-20S (bg)
6/2/2016	5.75	7.67	6.36						
6/6/2016				5.71	6.17				
6/7/2016						5.62	5.57	6.1	5.77
6/8/2016									
6/28/2016									
7/26/2016	5.72	7.66	6.22						
7/27/2016				5.46	6.14	5.59			5.79
7/28/2016							5.6	6.12	
8/1/2016									
9/2/2016									
9/14/2016	5.74	7.6	6.23						
9/16/2016						5.58			
9/19/2016				5.59	6.04			6.12	5.73
9/20/2016							5.53		
9/21/2016									
11/2/2016		7.35	6.08						5.67
11/3/2016				5.39	5.97	5.59		6.07	
11/4/2016	5.61								
11/8/2016							5.53		
11/10/2016									
11/14/2016									
1/11/2017				5.48	6.05	5.59			
1/12/2017	5.71	7.49							
1/13/2017			6.19					6.41	5.79
1/16/2017							5.59		
1/17/2017									
2/28/2017									
3/1/2017				5.41	5.94				
3/2/2017						5.54			
3/6/2017			6.2					6.34	5.63
3/7/2017	5.66	7.43							
3/8/2017									
3/9/2017							5.56		
4/26/2017				5.4	5.99			6.32	5.66
5/1/2017		7.22	6.21						
5/2/2017	5.65					5.47	5.61		
5/3/2017									
5/9/2017									
6/27/2017	5.7	7.32							
6/28/2017				5.36	6				
6/29/2017			6.21			5.56		6.47	5.85
7/7/2017									
7/10/2017							5.68		
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017	5.79	7.48						6.56	
10/4/2017				5.32		5.57			5.83
10/5/2017			6.16		6.11				
10/6/2017									
10/11/2017							5.46		
3/28/2018				5.34	6.1	5.59			

Prediction Limit

Constituent: pH (S.U.) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL
Plant Yates Client: Southern Company Data: Yates

	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-17S (bg)	YGWC-23S	YGWA-21I (bg)	YGWA-20S (bg)
3/29/2018	5.63	7.02	6.09					6.75	5.93
3/30/2018							5.73		
6/5/2018								6.09	
6/6/2018		7.43							5.86
6/7/2018	5.63		6.12		5.98				
6/11/2018				5.28		5.58			
6/12/2018							5.63		
6/13/2018									
9/25/2018				4.86	5.81	5.59		6.67	5.84
9/26/2018	5.63	7.13	5.84						
9/27/2018							5.47		
3/4/2019	5.75	7.46	6.18						
3/5/2019				5.26		5.48		7.22	6.07
3/6/2019					5.99		5.84		
4/2/2019						5.74		6.94	
4/3/2019	5.63	7.11	6.43	5.47	6.29				5.71
4/4/2019							5.64		

Prediction Limit

Constituent: pH (S.U.) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-33S	YGWC-24S	YGWC-36
6/2/2016			
6/6/2016			
6/7/2016			
6/8/2016	5.07	5.65	
6/28/2016	4.87		
7/26/2016			
7/27/2016			
7/28/2016			
8/1/2016	4.62	5.47	
9/2/2016			5.84
9/14/2016			
9/16/2016			
9/19/2016			
9/20/2016		5.61	
9/21/2016	4.63		
11/2/2016			
11/3/2016			
11/4/2016			
11/8/2016	4.58	5.55	
11/10/2016	4.42		
11/14/2016	4.35		6.28
1/11/2017			
1/12/2017			
1/13/2017			
1/16/2017			
1/17/2017	4.16	5.53	
2/28/2017			5.99
3/1/2017	4.17		
3/2/2017			
3/6/2017			
3/7/2017			
3/8/2017		5.62	
3/9/2017			
4/26/2017			
5/1/2017			
5/2/2017		5.46	
5/3/2017	4.19		
5/9/2017			6.3
6/27/2017			
6/28/2017			
6/29/2017			
7/7/2017		5.81	
7/10/2017	4.02		
7/13/2017			5.57
9/22/2017			5.5
9/29/2017			5.58
10/3/2017			
10/4/2017			
10/5/2017		5.45	
10/6/2017			5.51
10/11/2017	4.01		5.47
3/28/2018			

Prediction Limit

Constituent: pH (S.U.) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-33S	YGWC-24S	YGWC-36
3/29/2018			
3/30/2018	4.05	5.64	5.51
6/5/2018			
6/6/2018			
6/7/2018			
6/11/2018			
6/12/2018	4.03	5.64	
6/13/2018			5.5
9/25/2018			
9/26/2018	3.97	5.61	5.53
9/27/2018			
3/4/2019			
3/5/2019		5.72	
3/6/2019	3.27		5.21
4/2/2019			
4/3/2019			
4/4/2019	3.88	5.66	5.74

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWC-23S
6/2/2016						8	20	1.9	
6/6/2016		1.2	1.8						
6/7/2016	4.4			<1	5.2				56
6/8/2016									
7/26/2016						7.7	20	1.8	
7/27/2016	4.7	1.7	1.9	0.08 (J)					
7/28/2016					5.1				57
8/1/2016									
9/2/2016									
9/14/2016						7.5	19	1.8	
9/16/2016	4.8		1.7						
9/19/2016		1.8		0.08 (J)	4.8				
9/20/2016									68
9/21/2016									
11/2/2016				0.1 (J)		8.2	20		
11/3/2016	5.3	0.69 (J)	1.9		5				
11/4/2016								2	
11/8/2016									79
11/14/2016									
1/11/2017	5.2	<1 (*)	1.7						
1/12/2017							19	1.9	
1/13/2017				<1 (*)	4.3	8.1			
1/16/2017									72
1/17/2017									
2/28/2017									
3/1/2017		1.8	<1 (*)						
3/2/2017	5								
3/6/2017				<1	4.5	8			
3/7/2017							20	2.1	
3/8/2017									
3/9/2017									69
4/26/2017		1.6	1.9	<1	4.9				
5/1/2017						8.4	20		
5/2/2017	5							2	60
5/3/2017									
5/9/2017									
6/27/2017							18	2.1	
6/28/2017		<1 (*)	<1 (*)						
6/29/2017	5.2			<1 (*)	5.5	9.2			
7/7/2017									
7/10/2017									57
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017					5.8		16	2.3	
10/4/2017	5.3		1.7	<1 (*)					
10/5/2017		1.6				9.6			
10/6/2017									
10/11/2017									52
6/5/2018					6.1				
6/6/2018				0.049 (J)			8.3		
6/7/2018		0.68 (J)				8.5		2	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWC-23S
6/11/2018	5.2		0.95 (J)						
6/12/2018									41.4
6/13/2018									
9/25/2018	6.1	1	1.5	0.13 (J)	7				
9/26/2018						10.2	7.9	2.3	
9/27/2018									39.6
4/2/2019	5.1				3.8				
4/3/2019		0.82 (J)	1.3	0.12 (J)		8.5	7	2.1	
4/4/2019									27.9

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/2/2016			
6/6/2016			
6/7/2016			
6/8/2016	<1	910	
7/26/2016			
7/27/2016			
7/28/2016			
8/1/2016	1.1	830	
9/2/2016			72
9/14/2016			
9/16/2016			
9/19/2016			
9/20/2016	0.38 (J)		
9/21/2016		840	
11/2/2016			
11/3/2016			
11/4/2016			
11/8/2016	0.39 (J)		
11/14/2016		750	110
1/11/2017			
1/12/2017			
1/13/2017			
1/16/2017			
1/17/2017	<1 (*)	790	
2/28/2017			110
3/1/2017		850	
3/2/2017			
3/6/2017			
3/7/2017			
3/8/2017	0.29 (J)		
3/9/2017			
4/26/2017			
5/1/2017			
5/2/2017	0.29 (J)		
5/3/2017		800	
5/9/2017			130
6/27/2017			
6/28/2017			
6/29/2017			
7/7/2017	0.37 (J)		
7/10/2017		810	
7/13/2017			140
9/22/2017			160
9/29/2017			160
10/3/2017			
10/4/2017			
10/5/2017	<1 (*)		
10/6/2017			160
10/11/2017		730	150
6/5/2018			
6/6/2018			
6/7/2018			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell PL

Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/11/2018			
6/12/2018	0.35 (J)	759	
6/13/2018			144
9/25/2018			
9/26/2018	0.28 (J)	895	160
9/27/2018			
4/2/2019			
4/3/2019			
4/4/2019	0.29 (J)	847	119

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell

PL Plant Yates Client: Southern Company Data: Yates

	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWC-23S
6/2/2016						96	160	66	
6/6/2016		120	58						
6/7/2016	28			38	60				130
6/8/2016									
7/26/2016						92	177	78	
7/27/2016	74	94	35	74					
7/28/2016					81				119
8/1/2016									
9/2/2016									
9/14/2016						102	187	73	
9/16/2016	67		35						
9/19/2016		92		45	68				
9/20/2016									132
9/21/2016									
11/2/2016				53		115	181		
11/3/2016	41	104	48		61				
11/4/2016								75	
11/8/2016									146
11/14/2016									
1/11/2017	104	133	95						
1/12/2017							202	86	
1/13/2017				46	76	67			
1/16/2017									194
1/17/2017									
2/28/2017									
3/1/2017		119	79						
3/2/2017	77								
3/6/2017				164	167	159			
3/7/2017							257	108	
3/8/2017									
3/9/2017									288
4/26/2017		162	36	34	50				
5/1/2017						107	165		
5/2/2017	142							103	221
5/3/2017									
5/9/2017									
6/27/2017							189	73	
6/28/2017		98	45						
6/29/2017	53			68	94	79			
7/7/2017									
7/10/2017									123
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017					149		170	89	
10/4/2017	61		45	54					
10/5/2017		104				95			
10/6/2017									
10/11/2017									100
6/5/2018					109				
6/6/2018				79			151		
6/7/2018		68				90		142	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell

PL Plant Yates Client: Southern Company Data: Yates

	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWC-23S
6/11/2018	70		74						
6/12/2018									115
6/13/2018									
9/25/2018	86	109	63	73	122				
9/26/2018						116	144	86	
9/27/2018									105
4/2/2019	72				134				
4/3/2019		89	63	57		111	142	83	
4/4/2019									85

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell

PL Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/2/2016			
6/6/2016			
6/7/2016			
6/8/2016	66	1200	
7/26/2016			
7/27/2016			
7/28/2016			
8/1/2016	56	1300	
9/2/2016			243
9/14/2016			
9/16/2016			
9/19/2016			
9/20/2016	53		
9/21/2016		1220	
11/2/2016			
11/3/2016			
11/4/2016			
11/8/2016	58		
11/14/2016		1170	272
1/11/2017			
1/12/2017			
1/13/2017			
1/16/2017			
1/17/2017	56	1150	
2/28/2017			306
3/1/2017		1160	
3/2/2017			
3/6/2017			
3/7/2017			
3/8/2017	192		
3/9/2017			
4/26/2017			
5/1/2017			
5/2/2017	113		
5/3/2017		1280	
5/9/2017			303
6/27/2017			
6/28/2017			
6/29/2017			
7/7/2017	46		
7/10/2017		1170	
7/13/2017			282
9/22/2017			309
9/29/2017			273
10/3/2017			
10/4/2017			
10/5/2017	48		
10/6/2017			287
10/11/2017		1110	264
6/5/2018			
6/6/2018			
6/7/2018			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/13/2019 2:58 PM View: AP-3, B-B` Interwell

PL Plant Yates Client: Southern Company Data: Yates

	YGWC-24S	YGWC-33S	YGWC-36
6/11/2018			
6/12/2018	79	1150	
6/13/2018			292
9/25/2018			
9/26/2018	59	1280	277
9/27/2018			
4/2/2019			
4/3/2019			
4/4/2019	63	1260	240

Confidence Interval

Plant Yates Client: Southern Company Data: Yates Printed 6/28/2019, 10:00 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Beryllium (mg/L)	**YGWC-33S**	**0.023**	**0.0142**	**0.004**	**Yes**	**12**	**0**	**No**	**0.01**	**NP (normality)**
Cobalt (mg/L)	**YGWC-33S**	**0.02688**	**0.01358**	**0.013**	**Yes**	**13**	**0**	**No**	**0.01**	**Param.**

Confidence Interval

Plant Yates Client: Southern Company Data: Yates Printed 6/28/2019, 10:00 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	YGWC-23S	0.0015	-0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	YGWC-24S	0.0015	-0.0015	0.006	No	11	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	YGWC-33S	0.0015	-0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	YGWC-36	0.0015	0.0004	0.006	No	11	63.64	No	0.006	NP (normality)
Arsenic (mg/L)	YGWC-23S	0.0025	0.00065	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-24S	0.0025	0.00065	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-33S	0.004902	0.002698	0.01	No	13	7.692	No	0.01	Param.
Arsenic (mg/L)	YGWC-36	0.005	-0.0025	0.01	No	13	76.92	No	0.01	NP (NDs)
Barium (mg/L)	YGWC-23S	0.04905	0.0282	2	No	13	0	No	0.01	Param.
Barium (mg/L)	YGWC-24S	0.01984	0.01886	2	No	13	0	No	0.01	Param.
Barium (mg/L)	YGWC-33S	0.01845	0.01111	2	No	13	7.692	sqrt(x)	0.01	Param.
Barium (mg/L)	YGWC-36	0.04769	0.03521	2	No	13	0	x^2	0.01	Param.
Beryllium (mg/L)	YGWC-23S	0.0015	0.000072	0.004	No	13	38.46	No	0.01	NP (normality)
Beryllium (mg/L)	YGWC-24S	0.00125	0.0001	0.004	No	13	23.08	No	0.01	NP (normality)
Beryllium (mg/L)	**YGWC-33S**	**0.023**	**0.0142**	**0.004**	**Yes**	**12**	**0**	**No**	**0.01**	**NP (normality)**
Beryllium (mg/L)	YGWC-36	0.0003234	0.0002349	0.004	No	12	0	x^3	0.01	Param.
Cadmium (mg/L)	YGWC-23S	0.00125	0.00007	0.005	No	13	92.31	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-24S	0.00125	-0.0005	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-33S	0.003165	0.002214	0.005	No	13	0	x^2	0.01	Param.
Cadmium (mg/L)	YGWC-36	0.0002	0.00015	0.005	No	9	0	No	0.002	NP (normality)
Cobalt (mg/L)	YGWC-23S	0.005	0.00125	0.013	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	YGWC-24S	0.005	0.00125	0.013	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	**YGWC-33S**	**0.02688**	**0.01358**	**0.013**	**Yes**	**13**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	YGWC-36	0.005	0.0006	0.013	No	13	92.31	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	YGWC-23S	0.8968	0.2629	6.92	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-24S	0.8214	0.4161	6.92	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-33S	1.445	0.6257	6.92	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-36	1.112	0.4969	6.92	No	13	0	No	0.01	Param.
Fluoride (mg/L)	YGWC-23S	0.15	0.049	4	No	14	85.71	No	0.01	NP (NDs)
Fluoride (mg/L)	YGWC-24S	0.15	0.1	4	No	14	92.86	No	0.01	NP (NDs)
Fluoride (mg/L)	YGWC-33S	0.5426	0.1761	4	No	14	7.143	sqrt(x)	0.01	Param.
Fluoride (mg/L)	YGWC-36	0.18	0.043	4	No	14	57.14	No	0.01	NP (normality)
Lead (mg/L)	YGWC-23S	0.0025	-0.0025	0.015	No	11	90.91	No	0.006	NP (NDs)
Lead (mg/L)	YGWC-24S	0.0025	-0.0025	0.015	No	11	100	No	0.006	NP (NDs)
Lead (mg/L)	YGWC-33S	0.0025	0.0005	0.015	No	11	27.27	No	0.006	NP (Cohens/xfrm)
Lead (mg/L)	YGWC-36	0.0017	-0.0025	0.015	No	11	18.18	No	0.006	NP (normality)
Lithium (mg/L)	YGWC-23S	0.0025	0.0017	0.025	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	YGWC-24S	0.025	0.0025	0.025	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	YGWC-33S	0.02904	0.01765	0.025	No	13	0	No	0.01	Param.
Lithium (mg/L)	YGWC-36	0.006542	0.004945	0.025	No	13	0	x^2	0.01	Param.
Selenium (mg/L)	YGWC-23S	0.04349	0.02662	0.05	No	13	0	No	0.01	Param.
Selenium (mg/L)	YGWC-24S	0.005	0.00065	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	YGWC-33S	0.01501	0.007693	0.05	No	13	7.692	No	0.01	Param.
Selenium (mg/L)	YGWC-36	0.005	0.0017	0.05	No	13	23.08	No	0.01	NP (normality)
Thallium (mg/L)	YGWC-23S	0.0005	-0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	YGWC-24S	0.0005	-0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	YGWC-33S	0.0005	0.00006	0.002	No	11	36.36	No	0.006	NP (Cohens/xfrm)
Thallium (mg/L)	YGWC-36	0.0005	-0.0005	0.002	No	11	100	No	0.006	NP (NDs)

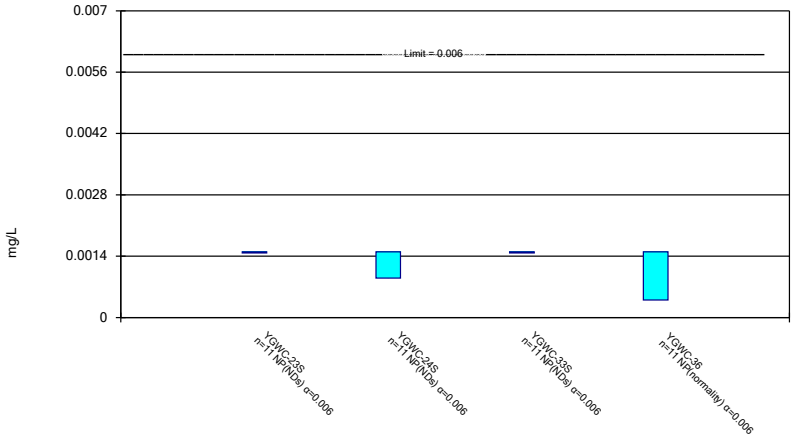
Confidence Interval

Plant Yates Client: Southern Company Data: Yates Printed 5/13/2019, 5:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	YGWC-23S	0.0015	0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	YGWC-24S	0.0015	0.0009	0.006	No	11	90.91	No	0.006	NP (NDs)
Antimony (mg/L)	YGWC-33S	0.0015	0.0015	0.006	No	11	100	No	0.006	NP (NDs)
Antimony (mg/L)	YGWC-36	0.0015	0.0004	0.006	No	11	63.64	No	0.006	NP (normality)
Arsenic (mg/L)	YGWC-23S	0.0025	0.0025	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-24S	0.0025	0.0025	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-33S	0.004902	0.002698	0.01	No	13	7.692	No	0.01	Param.
Arsenic (mg/L)	YGWC-36	0.0025	0.00066	0.01	No	13	76.92	No	0.01	NP (NDs)
Barium (mg/L)	YGWC-23S	0.04905	0.0282	2	No	13	0	No	0.01	Param.
Barium (mg/L)	YGWC-24S	0.01984	0.01886	2	No	13	0	No	0.01	Param.
Barium (mg/L)	YGWC-33S	0.01845	0.01111	2	No	13	7.692	sqrt(x)	0.01	Param.
Barium (mg/L)	YGWC-36	0.04769	0.03521	2	No	13	0	x^2	0.01	Param.
Beryllium (mg/L)	YGWC-23S	0.0015	0.000072	0.004	No	13	38.46	No	0.01	NP (normality)
Beryllium (mg/L)	YGWC-24S	0.0015	0.0001	0.004	No	13	23.08	No	0.01	NP (normality)
Beryllium (mg/L)	**YGWC-33S**	**0.023**	**0.0142**	**0.004**	**Yes**	**12**	**0**	**No**	**0.01**	**NP (normality)**
Beryllium (mg/L)	YGWC-36	0.0003234	0.0002349	0.004	No	12	0	x^3	0.01	Param.
Cadmium (mg/L)	YGWC-23S	0.0005	0.00007	0.005	No	13	92.31	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-24S	0.0005	0.0005	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-33S	0.003165	0.002214	0.005	No	13	0	x^2	0.01	Param.
Cadmium (mg/L)	YGWC-36	0.0002	0.00015	0.005	No	9	0	No	0.002	NP (normality)
Cobalt (mg/L)	YGWC-23S	0.005	0.005	0.013	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	YGWC-24S	0.005	0.005	0.013	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	**YGWC-33S**	**0.02688**	**0.01358**	**0.013**	**Yes**	**13**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	YGWC-36	0.005	0.0006	0.013	No	13	92.31	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	YGWC-23S	0.8968	0.2629	6.92	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-24S	0.8214	0.4161	6.92	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-33S	1.445	0.6257	6.92	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-36	1.112	0.4969	6.92	No	13	0	No	0.01	Param.
Fluoride (mg/L)	YGWC-23S	0.15	0.049	4	No	14	85.71	No	0.01	NP (NDs)
Fluoride (mg/L)	YGWC-24S	0.15	0.033	4	No	14	92.86	No	0.01	NP (NDs)
Fluoride (mg/L)	YGWC-33S	0.5426	0.1761	4	No	14	7.143	sqrt(x)	0.01	Param.
Fluoride (mg/L)	YGWC-36	0.18	0.05	4	No	14	57.14	No	0.01	NP (normality)
Lead (mg/L)	YGWC-23S	0.0025	0.00044	0.015	No	11	90.91	No	0.006	NP (NDs)
Lead (mg/L)	YGWC-24S	0.0025	0.0025	0.015	No	11	100	No	0.006	NP (NDs)
Lead (mg/L)	YGWC-33S	0.004567	0.0007647	0.015	No	11	27.27	No	0.01	Param.
Lead (mg/L)	YGWC-36	0.0025	0.0002	0.015	No	11	18.18	No	0.006	NP (normality)
Lithium (mg/L)	YGWC-23S	0.0025	0.0017	0.025	No	12	0	No	0.01	NP (normality)
Lithium (mg/L)	YGWC-24S	0.025	0.025	0.025	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	YGWC-33S	0.02904	0.01765	0.025	No	13	0	No	0.01	Param.
Lithium (mg/L)	YGWC-36	0.006542	0.004945	0.025	No	13	0	x^2	0.01	Param.
Selenium (mg/L)	YGWC-23S	0.04349	0.02662	0.05	No	13	0	No	0.01	Param.
Selenium (mg/L)	YGWC-24S	0.005	0.005	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	YGWC-33S	0.01501	0.007693	0.05	No	13	7.692	No	0.01	Param.
Selenium (mg/L)	YGWC-36	0.007754	0.001566	0.05	No	13	23.08	No	0.01	Param.
Thallium (mg/L)	YGWC-23S	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	YGWC-24S	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)
Thallium (mg/L)	YGWC-33S	0.001114	0.0001451	0.002	No	11	36.36	No	0.01	Param.
Thallium (mg/L)	YGWC-36	0.0005	0.0005	0.002	No	11	100	No	0.006	NP (NDs)

Non-Parametric Confidence Interval

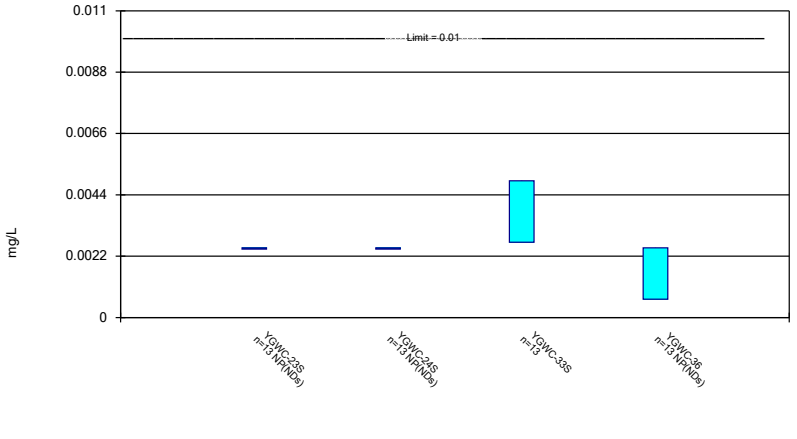
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

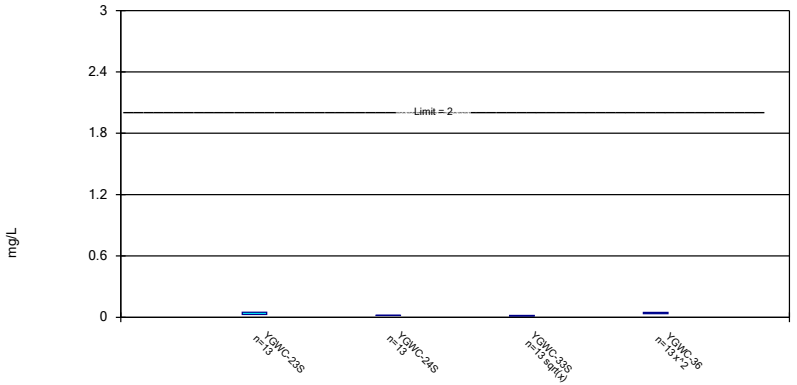
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric Confidence Interval

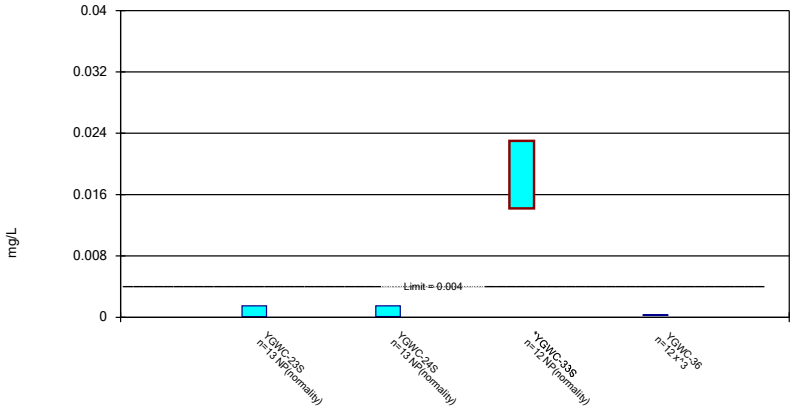
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

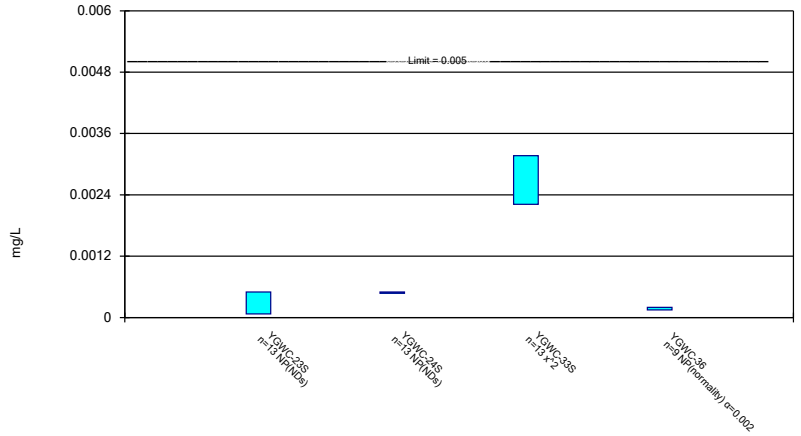
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

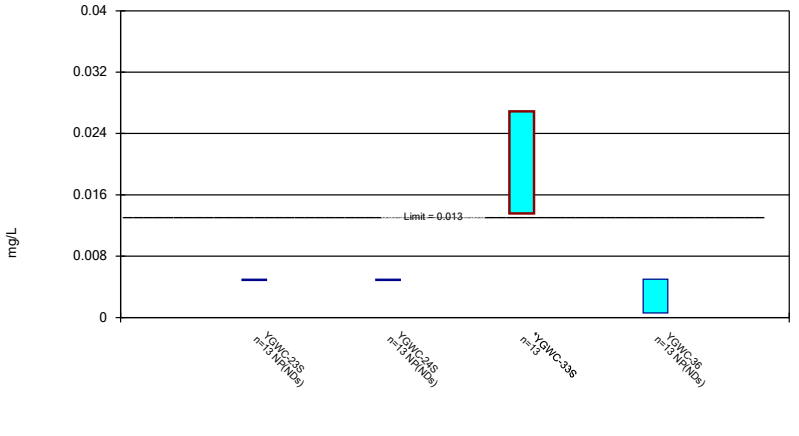
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

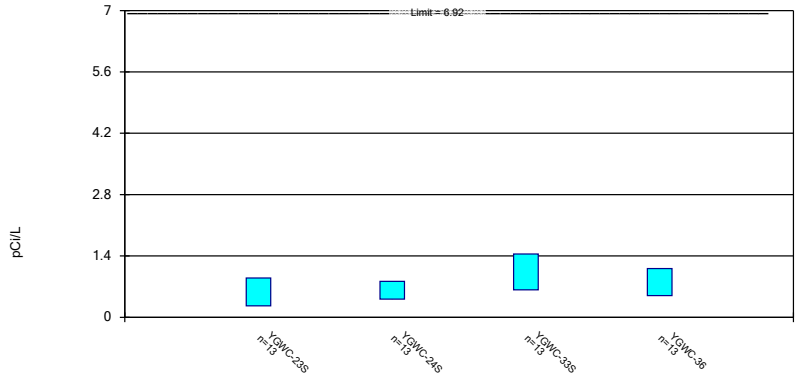
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric Confidence Interval

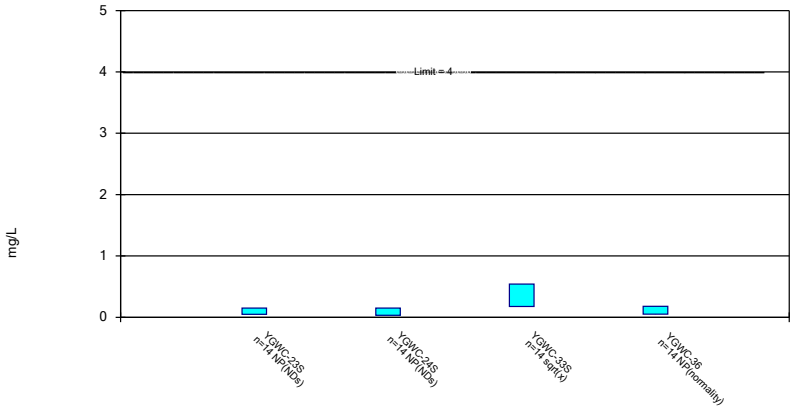
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

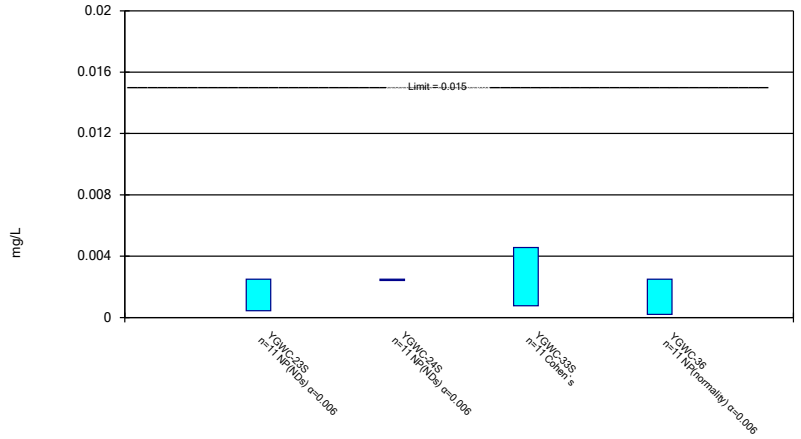
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

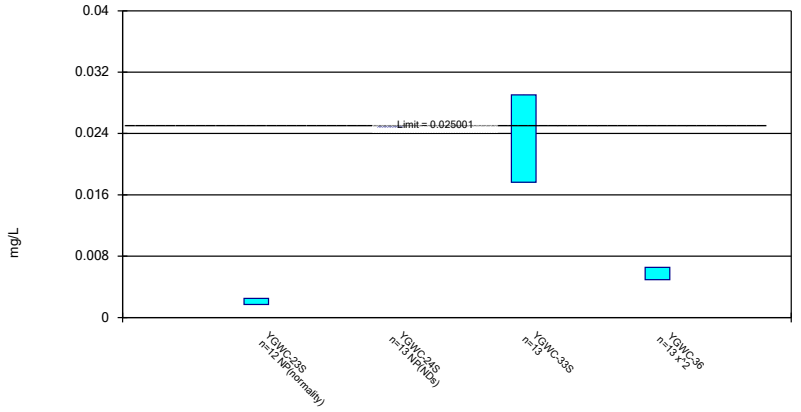
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

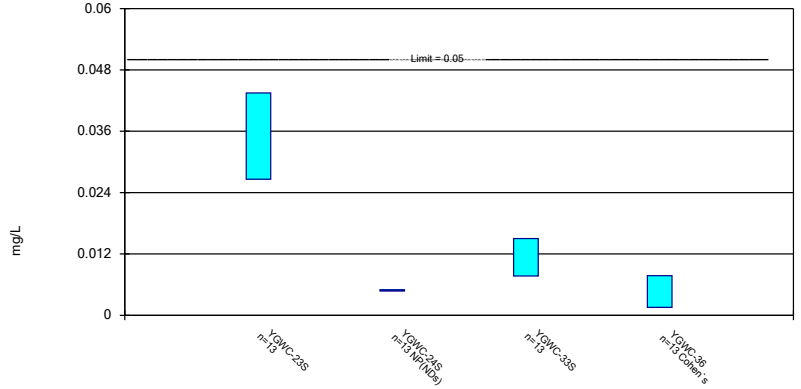
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

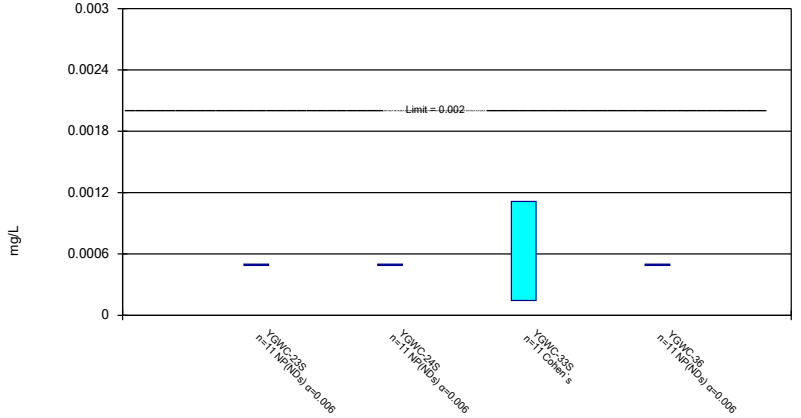
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 5/13/2019 5:07 PM View: AP-3, B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Yates

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.003			
6/8/2016		<0.003	<0.003	
7/28/2016	<0.003			
8/1/2016		<0.003	<0.003 (*)	
9/2/2016				<0.003
9/20/2016	<0.003	0.0009 (J)		
9/21/2016			<0.003	
11/8/2016	<0.003	<0.003		
11/14/2016			<0.003	0.0014 (J)
1/16/2017	<0.003			
1/17/2017		<0.003	<0.003	
2/28/2017				0.0004 (J)
3/1/2017			<0.003	
3/8/2017		<0.003		
3/9/2017	<0.003			
5/2/2017	<0.003	<0.003		
5/3/2017			<0.003	
5/9/2017				<0.003
7/7/2017		<0.003		
7/10/2017	<0.003		<0.003	
7/13/2017				<0.003
9/22/2017				<0.003
9/29/2017				<0.003
10/6/2017				<0.003
3/30/2018	<0.003	<0.003	<0.003	<0.003
3/5/2019		<0.003		
3/6/2019	<0.003		<0.003	0.0011 (J)
4/4/2019	<0.003	<0.003	<0.003	0.0041
Mean	0.0015	0.001445	0.0015	0.001591
Std. Dev.	0	0.0001809	0	0.0008972
Upper Lim.	0.0015	0.0015	0.0015	0.0015
Lower Lim.	0.0015	0.0009	0.0015	0.0004

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.005			
6/8/2016		<0.005	0.0033	
7/28/2016	<0.005			
8/1/2016		<0.005	0.007	
9/2/2016				<0.005
9/20/2016	<0.005	<0.005		
9/21/2016			0.0054	
11/8/2016	<0.005	<0.005		
11/14/2016			<0.005	<0.005
1/16/2017	<0.005			
1/17/2017		<0.005	0.0027 (J)	
2/28/2017				0.0006 (J)
3/1/2017			0.0041 (J)	
3/8/2017		<0.005		
3/9/2017	<0.005			
5/2/2017	<0.005 (*)	<0.005 (*)		
5/3/2017			0.0037 (J)	
5/9/2017				0.0006 (J)
7/7/2017		<0.005		
7/10/2017	<0.005		0.0044 (J)	
7/13/2017				<0.005
9/22/2017				<0.005
9/29/2017				<0.005
10/6/2017				<0.005
3/30/2018	<0.005	<0.005	0.0049 (J)	<0.005
6/12/2018	<0.005	<0.005	0.002 (J)	
6/13/2018				0.00066 (J)
9/26/2018		<0.005	0.0048 (J)	<0.005
9/27/2018	<0.005			
3/5/2019		<0.005		
3/6/2019	<0.005		0.0022 (J)	<0.005
4/4/2019	<0.005	<0.005	0.0024 (J)	<0.005
Mean	0.0025	0.0025	0.0038	0.002066
Std. Dev.	0	0	0.001483	0.0008246
Upper Lim.	0.0025	0.0025	0.004902	0.0025
Lower Lim.	0.0025	0.0025	0.002698	0.00066

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.045			
6/8/2016		0.02	0.029	
7/28/2016	0.0511			
8/1/2016		0.02	0.02	
9/2/2016				0.0409
9/20/2016	0.0561	0.0203		
9/21/2016			0.0183	
11/8/2016	0.054	0.0191		
11/14/2016			0.0149	0.0182
1/16/2017	0.0528			
1/17/2017		0.0192	<0.0139 (*)	
2/28/2017				0.023
3/1/2017			0.0142	
3/8/2017		0.0189		
3/9/2017	0.0469			
5/2/2017	0.0427	0.019		
5/3/2017			0.0151	
5/9/2017				0.0349
7/7/2017		0.019		
7/10/2017	0.0395		0.0137	
7/13/2017				0.0484
9/22/2017				0.0491
9/29/2017				0.0452
10/6/2017				0.0508
3/30/2018	0.03	0.02	0.012	0.043
6/12/2018	0.024	0.018	0.012	
6/13/2018				0.046
9/26/2018		0.019	0.012	0.048
9/27/2018	0.022			
3/5/2019		0.019		
3/6/2019	0.019		0.012	0.041
4/4/2019	0.019	0.02	0.014	0.042
Mean	0.03862	0.01935	0.01493	0.04081
Std. Dev.	0.01402	0.0006578	0.005291	0.009973
Upper Lim.	0.04905	0.01984	0.01845	0.04769
Lower Lim.	0.0282	0.01886	0.01111	0.03521

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.003			
6/8/2016		<0.003	0.012	
7/28/2016	<0.003			
8/1/2016		0.0001 (J)	0.0146	
9/2/2016				0.0003 (J)
9/20/2016	0.0001 (J)	0.0001 (J)		
9/21/2016			0.0149	
11/8/2016	<0.003 (*)	<0.003 (*)		
11/14/2016			0.0152	9E-05 (J)
1/16/2017	0.0001 (J)			
1/17/2017		0.0001 (J)	0.0142	
2/28/2017				0.0001 (J)
3/1/2017			0.015	
3/8/2017		0.0001 (J)		
3/9/2017	0.0001 (J)			
5/2/2017	9E-05 (J)	0.0001 (J)		
5/3/2017			0.0154	
5/9/2017				0.0002 (J)
7/7/2017		0.0001 (J)		
7/10/2017	<0.003		0.0143	
7/13/2017				0.0003 (J)
9/22/2017				0.0003 (J)
9/29/2017				0.0003 (J)
10/6/2017				0.0003 (J)
3/30/2018	<0.003	<0.003	0.018	<0.003 (o)
6/12/2018	8.1E-05 (J)	0.00012 (J)	0.016	
6/13/2018				0.00035 (J)
9/26/2018		0.00014 (J)	0.024 (o)	0.00032 (J)
9/27/2018	9E-05 (J)			
3/5/2019		0.00016 (J)		
3/6/2019	6.6E-05 (J)		0.023	0.00029 (J)
4/4/2019	7.2E-05 (J)	0.00015 (J)	0.025	0.00033 (J)
Mean	0.0006307	0.0004362	0.01647	0.000265
Std. Dev.	0.0007154	0.0006068	0.003798	8.702E-05
Upper Lim.	0.0015	0.0015	0.023	0.0003234
Lower Lim.	7.2E-05	0.0001	0.0142	0.0002349

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.001			
6/8/2016		<0.001	0.00098 (J)	
7/28/2016	<0.001			
8/1/2016		<0.001	0.0014	
9/2/2016				<0.001 (o)
9/20/2016	<0.001	<0.001		
9/21/2016			0.0017	
11/8/2016	7E-05 (J)	<0.001		
11/14/2016			0.0027	9E-05 (J,o)
1/16/2017	<0.001			
1/17/2017		<0.001	0.0033	
2/28/2017				0.0001 (J,o)
3/1/2017			0.0031	
3/8/2017		<0.001		
3/9/2017	<0.001			
5/2/2017	<0.001	<0.001		
5/3/2017			0.0031	
5/9/2017				0.0002 (J)
7/7/2017		<0.001		
7/10/2017	<0.001		0.0029	
7/13/2017				0.0002 (J)
9/22/2017				0.0002 (J)
9/29/2017				0.0002 (J)
10/6/2017				0.0002 (J)
3/30/2018	<0.001	<0.001	0.0028	<0.001 (o)
6/12/2018	<0.001	<0.001	0.0029	
6/13/2018				0.00019 (J)
9/26/2018		<0.001	0.0028	0.00018 (J)
9/27/2018	<0.001			
3/5/2019		<0.001		
3/6/2019	<0.001		0.003	0.00015 (J)
4/4/2019	<0.001	<0.001	0.0035	0.00019 (J)
Mean	0.0004669	0.0005	0.002629	0.00019
Std. Dev.	0.0001193	0	0.0007688	1.658E-05
Upper Lim.	0.0005	0.0005	0.003165	0.0002
Lower Lim.	7E-05	0.0005	0.002214	0.00015

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.01			
6/8/2016		<0.01	0.037	
7/28/2016	<0.01			
8/1/2016		<0.01	0.0297	
9/2/2016				0.0006 (J)
9/20/2016	<0.01	<0.01		
9/21/2016			0.0237	
11/8/2016	<0.01	<0.01		
11/14/2016			0.0144	<0.01
1/16/2017	<0.01			
1/17/2017		<0.01	0.0095 (J)	
2/28/2017				<0.01
3/1/2017			0.0125	
3/8/2017		<0.01		
3/9/2017	<0.01			
5/2/2017	<0.01	<0.01		
5/3/2017			0.0151	
5/9/2017				<0.01
7/7/2017		<0.01		
7/10/2017	<0.01		0.0121	
7/13/2017				<0.01
9/22/2017				<0.01
9/29/2017				<0.01
10/6/2017				<0.01
3/30/2018	<0.01	<0.01	0.013	<0.01
6/12/2018	<0.01	<0.01	0.014	
6/13/2018				<0.01
9/26/2018		<0.01	0.023	<0.01
9/27/2018	<0.01			
3/5/2019		<0.01		
3/6/2019	<0.01		0.028	<0.01
4/4/2019	<0.01	<0.01	0.031	<0.01
Mean	0.005	0.005	0.02023	0.004662
Std. Dev.	0	0	0.008941	0.00122
Upper Lim.	0.005	0.005	0.02688	0.005
Lower Lim.	0.005	0.005	0.01358	0.0006

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.303 (U)			
6/8/2016		1.06	0.384 (U)	
7/28/2016	0.386 (U)			
8/1/2016		0.467 (U)	1.55	
9/2/2016				0.873 (U)
9/20/2016	1.47	0.853 (U)		
9/21/2016			2.36	
9/22/2016				0.667 (U)
9/29/2016				1.63
10/6/2016				0.641 (U)
11/8/2016	0.22 (U)	0.433 (U)		
11/14/2016			0.851 (U)	0.0451 (U)
1/16/2017	0.147 (U)			
1/17/2017		0.0759 (U)	1.41 (U)	
2/28/2017				1.34 (U)
3/1/2017			1.13	
3/8/2017		0.479 (U)		
3/9/2017	0.0892 (U)			
5/2/2017	0.149 (U)	0.506 (U)		
5/3/2017			0.584 (U)	
5/9/2017				0.309 (U)
7/7/2017		0.713 (U)		
7/10/2017	0.815 (U)		0.46 (U)	
7/13/2017				0.618 (U)
3/30/2018	0.659 (U)	0.409 (U)	0.607 (U)	0.721 (U)
6/12/2018	1.03 (U)	0.728 (U)	0.633 (U)	
6/13/2018				1.04 (U)
9/26/2018		0.981	1.38	0.604 (U)
9/27/2018	1.06 (U)			
3/5/2019		0.837 (U)		
3/6/2019	0.736 (U)		0.97 (U)	0.919 (U)
4/4/2019	0.474 (U)		1.14	1.05 (U)
4/9/2019		0.502 (U)		
Mean	0.5799	0.6188	1.035	0.8044
Std. Dev.	0.4262	0.2725	0.5509	0.4135
Upper Lim.	0.8968	0.8214	1.445	1.112
Lower Lim.	0.2629	0.4161	0.6257	0.4969

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.3			
6/8/2016		<0.3	0.34	
7/28/2016	0.03 (J)			
8/1/2016		<0.3	0.24 (J)	
9/2/2016				0.05 (J)
9/20/2016	<0.3	<0.3		
9/21/2016			0.22 (J)	
11/8/2016	<0.3	<0.3 (*)		
11/14/2016			0.35	0.18 (J)
1/16/2017	<0.3			
1/17/2017		<0.3	0.22 (J)	
2/28/2017				0.09 (J)
3/1/2017			0.33	
3/8/2017		<0.3 (*)		
3/9/2017	<0.3 (*)			
5/2/2017	<0.3	<0.3		
5/3/2017			0.2 (J)	
5/9/2017				0.009 (J)
7/7/2017		<0.3		
7/10/2017	<0.3 (*)		0.57	
7/13/2017				<0.3
9/22/2017				0.09 (J)
9/29/2017				<0.3
10/5/2017		<0.3		
10/6/2017				<0.3
10/11/2017	<0.3		<0.3 (*)	<0.3 (*)
3/30/2018	<0.3	<0.3	1.4	<0.3
6/12/2018	<0.3	<0.3	0.18 (J)	
6/13/2018				<0.3
9/26/2018		<0.3	0.07 (J)	<0.3
9/27/2018	<0.3			
3/5/2019		<0.3		
3/6/2019	<0.3		0.49	<0.3
4/4/2019	0.049 (J)	0.033 (J)	0.57	0.043 (J)
Mean	0.1342	0.1416	0.3807	0.1187
Std. Dev.	0.0403	0.03127	0.3307	0.05242
Upper Lim.	0.15	0.15	0.5426	0.18
Lower Lim.	0.049	0.033	0.1761	0.05

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.00044 (J)			
6/8/2016		<0.005	<0.005 (*)	
7/28/2016	<0.005			
8/1/2016		<0.005	0.0005 (J)	
9/2/2016				0.0017 (J)
9/20/2016	<0.005	<0.005		
9/21/2016			0.0006 (J)	
11/8/2016	<0.005	<0.005		
11/14/2016			0.0012 (J)	0.0002 (J)
1/16/2017	<0.005			
1/17/2017		<0.005	0.002 (J)	
2/28/2017				0.0003 (J)
3/1/2017			0.002 (J)	
3/8/2017		<0.005		
3/9/2017	<0.005			
5/2/2017	<0.005	<0.005		
5/3/2017			<0.005 (*)	
5/9/2017				0.0004 (J)
7/7/2017		<0.005		
7/10/2017	<0.005		0.0018 (J)	
7/13/2017				0.0004 (J)
9/22/2017				0.0003 (J)
9/29/2017				0.0002 (J)
10/6/2017				0.0002 (J)
3/30/2018	<0.005	<0.005	<0.005	<0.005
3/5/2019		<0.005		
3/6/2019	<0.005		0.0012 (J)	<0.005
4/4/2019	<0.005	<0.005	0.0014 (J)	0.00037 (J)
Mean	0.002313	0.0025	0.001655	0.0008245
Std. Dev.	0.0006211	0	0.0007299	0.000931
Upper Lim.	0.0025	0.0025	0.004567	0.0025
Lower Lim.	0.00044	0.0025	0.0007647	0.0002

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.005 (o)			
6/8/2016		<0.05	0.0099	
7/28/2016	0.0019 (J)			
8/1/2016		<0.05	0.0142 (J)	
9/2/2016				0.0029 (J)
9/20/2016	0.0021 (J)	<0.05		
9/21/2016			0.0145 (J)	
11/8/2016	0.0024 (J)	<0.05		
11/14/2016			0.0253 (J)	0.0044 (J)
1/16/2017	0.0022 (J)			
1/17/2017		<0.05	0.0256 (J)	
2/28/2017				0.0038 (J)
3/1/2017			0.0219 (J)	
3/8/2017		<0.05		
3/9/2017	0.0025 (J)			
5/2/2017	0.0019 (J)	<0.05		
5/3/2017			0.0217 (J)	
5/9/2017				0.0057 (J)
7/7/2017		<0.05		
7/10/2017	0.0018 (J)		0.0214 (J)	
7/13/2017				0.007 (J)
9/22/2017				0.0067 (J)
9/29/2017				0.0064 (J)
10/6/2017				0.0065 (J)
3/30/2018	0.0039 (J)	<0.05	0.024 (J)	0.0061 (J)
6/12/2018	0.0017 (J)	<0.05	0.023 (J)	
6/13/2018				0.0065 (J)
9/26/2018		<0.05	0.034 (J)	0.0063 (J)
9/27/2018	0.0017 (J)			
3/5/2019		<0.05		
3/6/2019	0.0025 (J)		0.033 (J)	0.0057 (J)
4/4/2019	0.0018 (J)	<0.05	0.035 (J)	0.0058 (J)
Mean	0.0022	0.025	0.02335	0.005677
Std. Dev.	0.000612	0	0.007655	0.001229
Upper Lim.	0.0025	0.025	0.02904	0.006542
Lower Lim.	0.0017	0.025	0.01765	0.004945

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.037			
6/8/2016		<0.01	0.0011 (J)	
7/28/2016	0.0385			
8/1/2016		<0.01	0.0192	
9/2/2016				0.0012 (J)
9/20/2016	0.0464	<0.01		
9/21/2016			0.0147	
11/8/2016	0.0521	<0.01		
11/14/2016			<0.01	<0.01
1/16/2017	0.0469			
1/17/2017		<0.01	0.0122	
2/28/2017				0.0017 (J)
3/1/2017			0.0151	
3/8/2017		<0.01		
3/9/2017	0.0437			
5/2/2017	0.0395	<0.01		
5/3/2017			0.012	
5/9/2017				0.0018 (J)
7/7/2017		<0.01		
7/10/2017	0.0386		0.0106	
7/13/2017				0.0031 (J)
9/22/2017				0.0024 (J)
9/29/2017				0.002 (J)
10/6/2017				<0.01
3/30/2018	0.028	<0.01	0.011	<0.01
6/12/2018	0.026	<0.01	0.0057 (J)	
6/13/2018				0.0024 (J)
9/26/2018		<0.01	0.016	0.0037 (J)
9/27/2018	0.023			
3/5/2019		<0.01		
3/6/2019	0.019		0.013	0.0033 (J)
4/4/2019	0.017	<0.01	0.012	0.0029 (J)
Mean	0.03505	0.005	0.01135	0.003038
Std. Dev.	0.01134	0	0.004923	0.001312
Upper Lim.	0.04349	0.005	0.01501	0.007754
Lower Lim.	0.02662	0.005	0.007693	0.001566

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 5/13/2019 5:09 PM View: AP-3, B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.001			
6/8/2016		<0.001	<0.001	
7/28/2016	<0.001			
8/1/2016		<0.001	6E-05 (J)	
9/2/2016				<0.001
9/20/2016	<0.001	<0.001		
9/21/2016			<0.001	
11/8/2016	<0.001	<0.001		
11/14/2016			<0.001	<0.001
1/16/2017	<0.001			
1/17/2017		<0.001	0.0004 (J)	
2/28/2017				<0.001
3/1/2017			0.0003 (J)	
3/8/2017		<0.001		
3/9/2017	<0.001			
5/2/2017	<0.001	<0.001		
5/3/2017			0.0002 (J)	
5/9/2017				<0.001
7/7/2017		<0.001		
7/10/2017	<0.001		0.0002 (J)	
7/13/2017				<0.001
9/22/2017				<0.001
9/29/2017				<0.001
10/6/2017				<0.001
3/30/2018	<0.001	<0.001	<0.001	<0.001
3/5/2019		<0.001		
3/6/2019	<0.001		0.00016 (J)	<0.001
4/4/2019	<0.001	<0.001	0.00018 (J)	<0.001
Mean	0.0005	0.0005	0.0003182	0.0005
Std. Dev.	0	0	0.0001667	0
Upper Lim.	0.0005	0.0005	0.001114	0.0005
Lower Lim.	0.0005	0.0005	0.0001451	0.0005

Interwell Prediction Limit

Plant Yates Client: Southern Company Data: Yates AP-A Printed 4/18/2019, 4:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Sulfate (mg/L)	**YGWC-49**	**17.42**	**n/a**	**3/28/2019**	**82.8**	**Yes**	**88**	**11.36**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**

Interwell Prediction Limit

Plant Yates Client: Southern Company Data: Yates AMA, R6 Printed 4/18/2019, 4:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	YGWC-49	0.1	n/a	3/28/2019	0.04ND	No	82	56.1	n/a	0.0002869	NP Inter (NDs) 1 of 2
Calcium (mg/L)	YGWC-49	37	n/a	3/28/2019	11.3	No	88	0	n/a	0.00025	NP Inter (normality) ...
Fluoride (mg/L)	YGWC-49	0.32	n/a	3/28/2019	0.3ND	No	104	88.46	n/a	0.0001817	NP Inter (NDs) 1 of 2
pH (S.U.)	YGWC-49	7.67	4.86	3/28/2019	5.86	No	104	0	n/a	0.0003634	NP Inter (normality) ...
Sulfate (mg/L)	**YGWC-49**	**17.42**	**n/a**	**3/28/2019**	**82.8**	**Yes**	**88**	**11.36**	**x^(1/3)**	**0.001504**	**Param Inter 1 of 2**
Total Dissolved Solids ...	YGWC-49	185.7	n/a	3/28/2019	164	No	88	0	sqrt(x)	0.001504	Param Inter 1 of 2

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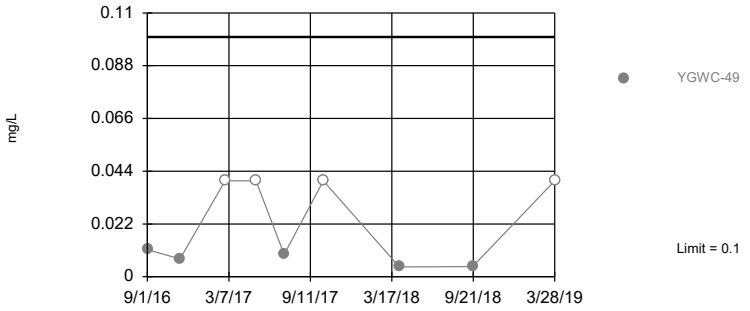
Hollow symbols indicate censored values.

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 82 background values. 56.1% NDs. Annual per-constituent alpha = 0.002865. Individual comparison alpha = 0.0002869 (1 of 2). Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/18/2019 4:53 PM View: AP-A Interwell PL
Plant Yates Client: Southern Company Data: Yates AMA, R6

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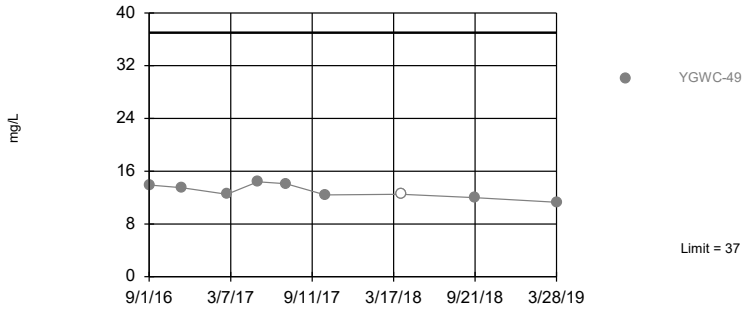
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 88 background values. Annual per-constituent alpha = 0.002497. Individual comparison alpha = 0.00025 (1 of 2). Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: Calcium Analysis Run 4/18/2019 4:53 PM View: AP-A Interwell PL
Plant Yates Client: Southern Company Data: Yates AMA, R6

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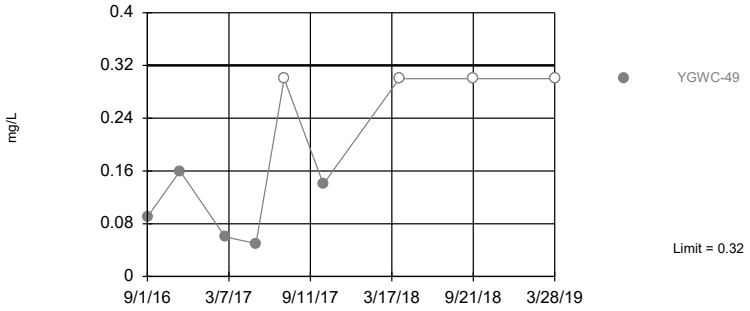
Hollow symbols indicate censored values.

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 104 background values. 88.46% NDs. Annual per-constituent alpha = 0.001816. Individual comparison alpha = 0.0001817 (1 of 2). Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 4/18/2019 4:53 PM View: AP-A Interwell PL
Plant Yates Client: Southern Company Data: Yates AMA, R6

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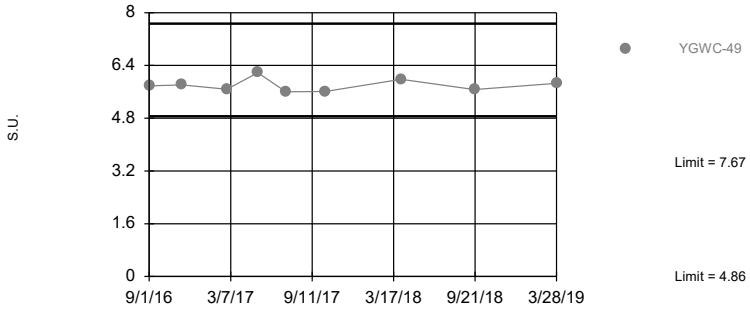
Within Limits

Prediction Limit

Interwell Non-parametric



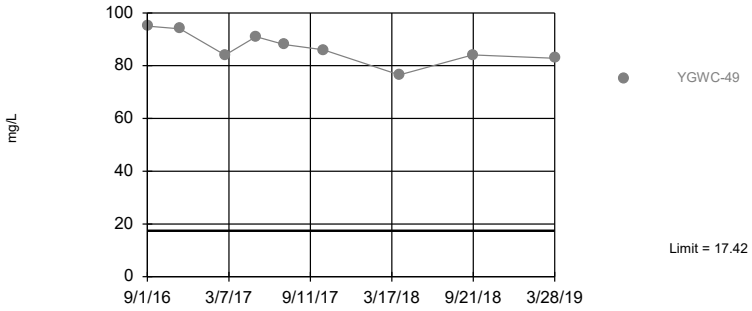
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 104 background values. Annual per-constituent alpha = 0.003631. Individual comparison alpha = 0.0003634 (1 of 2). Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 4/18/2019 4:53 PM View: AP-A Interwell PL
Plant Yates Client: Southern Company Data: Yates AMA, R6

Exceeds Limit: YGWC-49

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=1.516, Std. Dev.=0.5946, n=88, 11.36% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.967, critical = 0.961. Kappa = 1.81 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Assumes 4 future values.

Constituent: Sulfate Analysis Run 4/18/2019 4:53 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

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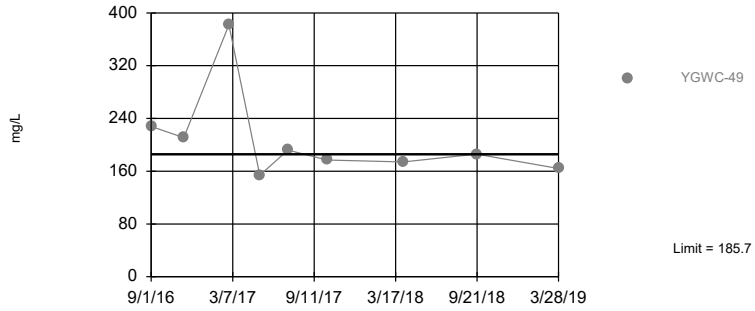
Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=9.548, Std. Dev.=2.254, n=88. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9781, critical = 0.961. Kappa = 1.81 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Assumes 4 future values.

Constituent: Total Dissolved Solids Analysis Run 4/18/2019 4:53 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/18/2019 4:55 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWA-20S (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-49
6/2/2016	<0.05	<0.05				<0.05 (o)			
6/6/2016			<0.05				<0.05 (o)		
6/7/2016				<0.05	<0.05			<0.05 (o)	
7/26/2016	0.0047 (J)	<0.1				0.0052 (J)			
7/27/2016			<0.1		<0.1		0.0059 (J)	0.008 (J)	
7/28/2016				<0.1 (*)					
9/1/2016									0.0113 (J)
9/14/2016	<0.1	0.01 (J)				0.0071 (J)			
9/16/2016							0.0079 (J)	0.0086 (J)	
9/19/2016			<0.1	<0.1	<0.1				
11/2/2016	<0.1				<0.1	<0.1 (o)			
11/3/2016			<0.1	<0.1			0.0082 (J)	0.0077 (J)	
11/4/2016		<0.1							
11/15/2016									0.0074 (J)
1/11/2017			<0.04				0.0096 (J)	0.0092 (J)	
1/12/2017		<0.04				0.0076 (J)			
1/13/2017	<0.04			<0.04	<0.04				
2/27/2017									<0.04
3/1/2017			<0.04				<0.04 (o)		
3/2/2017								0.0095 (J)	
3/6/2017	<0.04			<0.04	<0.04				
3/7/2017		<0.04				0.0089 (J)			
4/26/2017			<0.04	<0.04	<0.04		0.0091 (J)		
5/1/2017	<0.04					0.0061 (J)			
5/2/2017		<0.04						<0.04 (o)	
5/9/2017									<0.04
6/27/2017		<0.04				0.0079 (J)			
6/28/2017			<0.04				0.0079 (J)		
6/29/2017	<0.04			<0.04	<0.04			0.0074 (J)	
7/13/2017									0.0093 (J)
10/3/2017		<0.04		<0.04		0.0094 (J)			
10/4/2017					<0.04		0.009 (J)	0.0077 (J)	
10/5/2017	<0.04		<0.04						
10/11/2017									<0.04
4/4/2018									0.0041 (J)
6/5/2018				0.0092 (J)					
6/6/2018					0.0049 (J)	0.0098 (J)			
6/7/2018	0.0045 (J)	<0.04	<0.04						
6/11/2018							0.0093 (J)	0.01 (J)	
9/20/2018									0.0042 (J)
9/25/2018			0.0046 (J)	0.0054 (J)	<0.04		0.007 (J)	0.0096 (J)	
9/26/2018	0.005 (J)	0.0057 (J)				0.01 (J)			
3/28/2019									<0.04

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/18/2019 4:55 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWA-20S (bg)	YGWA-17S (bg)	YGWC-49
6/2/2016	8.8	2.4	33						
6/6/2016				1.4	6.2				
6/7/2016						3.7	2.3	2.2	
7/26/2016	7.69	2.12	32.3						
7/27/2016				1.19	4.73		2.08	2	
7/28/2016						3.15			
9/1/2016									13.9
9/14/2016	8.49	2.18	31						
9/16/2016				1.5				1.97	
9/19/2016					4.76	3.17	1.97		
11/2/2016	7.83		30.9				2.13		
11/3/2016				1.31	5.25	3.4		1.99	
11/4/2016		2.17 (J)							
11/15/2016									13.5
1/11/2017				1.25	4.74			2.28	
1/12/2017		2.37	35.7						
1/13/2017	8.08					4.98	2.45		
2/27/2017									12.5
3/1/2017				1.26	5.37				
3/2/2017								2.15	
3/6/2017	8.64					6.28	2.48		
3/7/2017		2.34	32.7						
4/26/2017				1.05	4.28	6.65	2.3		
5/1/2017	13.4		37						
5/2/2017		2.17						1.95	
5/9/2017									14.4
6/27/2017		2.13	36.5						
6/28/2017				1.06	4.95				
6/29/2017	8.81					6.04	2.54	2.02	
7/13/2017									14.1
10/3/2017		2.15	30.9			8.28			
10/4/2017				1.1			2.25	2.03	
10/5/2017	9.29				5.28				
10/11/2017									12.4
4/4/2018									<25
6/5/2018						9.1			
6/6/2018			26.2				2.3		
6/7/2018	8.2	2.3			4.8				
6/11/2018				1.4				2.1	
9/20/2018									12 (J)
9/25/2018				1	4.6	10.4 (J)	2.3	2.1	
9/26/2018	9.5 (J)	2.3	25.8						
3/28/2019									11.3 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/18/2019 4:55 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-21I (bg)	YGWA-20S (bg)	YGWC-49
6/2/2016	<0.2	0.11 (J)	<0.2						
6/6/2016				<0.2	<0.2				
6/7/2016						<0.2	<0.2	<0.2	
7/26/2016	<0.3	0.05 (J)	<0.3						
7/27/2016				<0.3	<0.3	<0.3		<0.3	
7/28/2016							0.02 (J)		
9/1/2016									0.09 (J)
9/14/2016	<0.3	0.04 (J)	<0.3						
9/16/2016					<0.3	<0.3			
9/19/2016				<0.3			0.02 (J)	<0.3	
11/2/2016	<0.3 (*)	<0.3 (*)						<0.3	
11/3/2016				<0.3	<0.3	<0.3	<0.3 (*)		
11/4/2016			<0.3						
11/15/2016									0.16 (J)
1/11/2017				<0.3	<0.3	<0.3			
1/12/2017		0.04 (J)	<0.3						
1/13/2017	<0.3						<0.3	<0.3	
2/27/2017									0.06 (J)
3/1/2017				<0.3 (*)	<0.3 (*)				
3/2/2017						<0.3 (*)			
3/6/2017	<0.3 (*)						<0.3 (*)	<0.3 (*)	
3/7/2017		<0.3 (*)	<0.3 (*)						
4/26/2017				<0.3	<0.3		0.04 (J)	<0.3	
5/1/2017	<0.3	<0.3 (*)							
5/2/2017			<0.3			<0.3			
5/9/2017									0.05 (J)
6/27/2017		<0.3 (*)	<0.3						
6/28/2017				<0.3	<0.3				
6/29/2017	<0.3 (*)					<0.3 (*)	<0.3 (*)	<0.3 (*)	
7/13/2017									<0.3
10/3/2017		<0.3 (*)	<0.3				<0.3 (*)		
10/4/2017					<0.3	<0.3		<0.3	
10/5/2017	<0.3			<0.3					
10/11/2017									0.14 (J)
3/28/2018				<0.3	<0.3	<0.3			
3/29/2018	<0.3	<0.3	<0.3				<0.3	<0.3	
4/4/2018									<0.3
6/5/2018							0.13 (J)		
6/6/2018		0.15 (J)						<0.3	
6/7/2018	<0.3		<0.3	<0.3					
6/11/2018					<0.3	<0.3			
9/20/2018									<0.3
9/25/2018				<0.3	<0.3	<0.3	0 (J)	<0.3	
9/26/2018	<0.3	<0.3	<0.3						
3/4/2019	<0.3	0.19 (J)	<0.3						
3/5/2019					<0.3	<0.3	0.32	<0.3	
3/6/2019				<0.3					
3/28/2019									<0.3

Prediction Limit

Constituent: pH (S.U.) Analysis Run 4/18/2019 4:55 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-21I (bg)	YGWA-20S (bg)	YGWC-49
6/2/2016	6.36	7.67	5.75						
6/6/2016				6.17	5.71				
6/7/2016						5.62	6.1	5.77	
7/26/2016	6.22	7.66	5.72						
7/27/2016				6.14	5.46	5.59		5.79	
7/28/2016							6.12		
9/1/2016									5.78
9/14/2016	6.23	7.6	5.74						
9/16/2016						5.58			
9/19/2016				6.04	5.59		6.12	5.73	
11/2/2016	6.08	7.35						5.67	
11/3/2016				5.97	5.39	5.59	6.07		
11/4/2016			5.61						
11/15/2016									5.81
1/11/2017				6.05	5.48	5.59			
1/12/2017		7.49	5.71						
1/13/2017	6.19						6.41	5.79	
2/27/2017									5.68
3/1/2017				5.94	5.41				
3/2/2017						5.54			
3/6/2017	6.2						6.34	5.63	
3/7/2017		7.43	5.66						
4/26/2017				5.99	5.4		6.32	5.66	
5/1/2017	6.21	7.22							
5/2/2017			5.65			5.47			
5/9/2017									6.18
6/27/2017		7.32	5.7						
6/28/2017				6	5.36				
6/29/2017	6.21					5.56	6.47	5.85	
7/13/2017									5.6
10/3/2017		7.48	5.79				6.56		
10/4/2017					5.32	5.57		5.83	
10/5/2017	6.16			6.11					
10/11/2017									5.61
4/4/2018									5.98
6/5/2018							6.09		
6/6/2018		7.43						5.86	
6/7/2018	6.12		5.63	5.98					
6/11/2018					5.28	5.58			
9/20/2018									5.67
9/25/2018				5.81	4.86	5.59	6.67	5.84	
9/26/2018	5.84	7.13	5.63						
3/4/2019	6.18	7.46	5.75						
3/5/2019					5.26	5.48	7.22	6.07	
3/6/2019				5.99					
3/28/2019									5.86
4/2/2019						5.74	6.94		
4/3/2019	6.43	7.11	5.63	6.29	5.47			5.71	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 4/18/2019 4:55 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWC-49	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)
6/2/2016							8	20	1.9
6/6/2016			1.2	1.8					
6/7/2016		4.4			<1	5.2			
7/26/2016							7.7	20	1.8
7/27/2016		4.7	1.7	1.9	0.08 (J)				
7/28/2016						5.1			
9/1/2016	95								
9/14/2016							7.5	19	1.8
9/16/2016		4.8		1.7					
9/19/2016			1.8		0.08 (J)	4.8			
11/2/2016					0.1 (J)		8.2	20	
11/3/2016		5.3	0.69 (J)	1.9		5			
11/4/2016									2
11/15/2016	94								
1/11/2017		5.2	<1 (*)	1.7					
1/12/2017								19	1.9
1/13/2017					<1 (*)	4.3	8.1		
2/27/2017	84								
3/1/2017			1.8	<1.6 (*)					
3/2/2017		5							
3/6/2017					<1	4.5	8		
3/7/2017								20	2.1
4/26/2017			1.6	1.9	<1	4.9			
5/1/2017							8.4	20	
5/2/2017		5							2
5/9/2017	91								
6/27/2017								18	2.1
6/28/2017			<1.7 (*)	<1.5 (*)					
6/29/2017		5.2			<1 (*)	5.5	9.2		
7/13/2017	88								
10/3/2017						5.8		16	2.3
10/4/2017		5.3		1.7	<1 (*)				
10/5/2017			1.6				9.6		
10/11/2017	86								
4/4/2018	76.5								
6/5/2018						6.1			
6/6/2018					0.049 (J)			8.3	
6/7/2018			0.68 (J)				8.5		2
6/11/2018		5.2		0.95 (J)					
9/20/2018	84.1								
9/25/2018		6.1	1	1.5	0.13 (J)	7			
9/26/2018							10.2	7.9	2.3
3/28/2019	82.8								

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/18/2019 4:55 PM View: AP-A Interwell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWC-49	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)
6/2/2016							96	160	66
6/6/2016			120	58					
6/7/2016		28			38	60			
7/26/2016							92	177	78
7/27/2016		74	94	35	74				
7/28/2016						81			
9/1/2016	228								
9/14/2016							102	187	73
9/16/2016		67		35					
9/19/2016			92		45	68			
11/2/2016					53		115	181	
11/3/2016		41	104	48		61			
11/4/2016									75
11/15/2016	211								
1/11/2017		104	133	95					
1/12/2017								202	86
1/13/2017					46	76	67		
2/27/2017	382								
3/1/2017			119	79					
3/2/2017		77							
3/6/2017					164	167	159		
3/7/2017								257	108
4/26/2017			162	36	34	50			
5/1/2017							107	165	
5/2/2017		142							103
5/9/2017	154								
6/27/2017								189	73
6/28/2017			98	45					
6/29/2017		53			68	94	79		
7/13/2017	192								
10/3/2017						149		170	89
10/4/2017		61		45	54				
10/5/2017			104				95		
10/11/2017	177								
4/4/2018	174								
6/5/2018						109			
6/6/2018					79			151	
6/7/2018			68				90		142
6/11/2018		70		74					
9/20/2018	186								
9/25/2018		86	109	63	73	122			
9/26/2018							116	144	86
3/28/2019	164								

Intrawell Prediction Limit

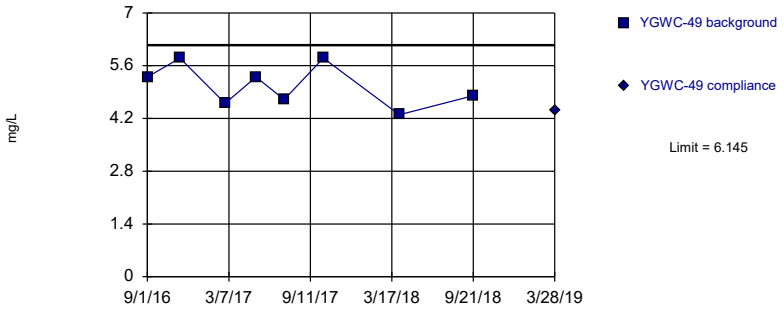
Plant Yates Client: Southern Company Data: Yates AMA, R6 Printed 4/18/2019, 4:57 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Chloride (mg/L)	YGWC-49	6.145	3/28/2019	4.4	No	8	0	No	0.001504	Param Intra 1 of 3

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.075, Std. Dev.=0.56, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9188, critical = 0.749. Kappa = 1.91 (c=7, w=5, 1 of 3, event alpha = 0.05132). Report alpha = 0.001504.

Constituent: Chloride Analysis Run 4/18/2019 4:56 PM View: AP-A Intrawell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 4/18/2019 4:57 PM View: AP-A Intrawell PL

Plant Yates Client: Southern Company Data: Yates AMA, R6

	YGWC-49	YGWC-49
9/1/2016	5.3	
11/15/2016	5.8	
2/27/2017	4.6	
5/9/2017	5.3	
7/13/2017	4.7	
10/11/2017	5.8	
4/4/2018	4.3	
9/20/2018	4.8	
3/28/2019		4.4

Intrawell Prediction Limit

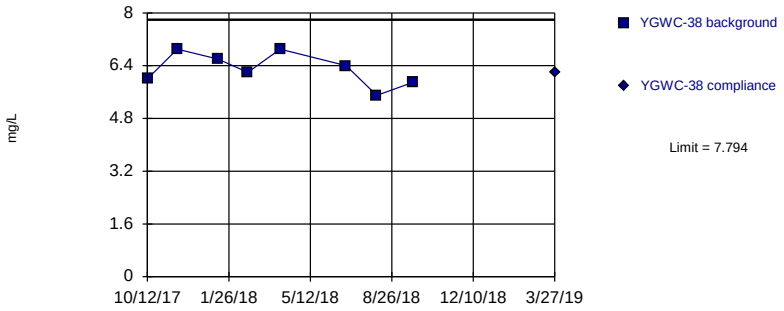
Plant Yates Client: Southern Company Data: Yates R6 Printed 6/27/2019, 5:26 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Trans...	Alpha	Method
Chloride (mg/L)	YGWC-38	7.794	n/a	3/27/2019	6.2	No	8	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWA-39	3.994	n/a	3/27/2019	1.4	No	8	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWA-40	6.542	n/a	3/26/2019	4.4	No	8	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWC-41	5.026	n/a	3/28/2019	3.2	No	8	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWC-42	5.532	n/a	3/27/2019	3.9	No	8	0	No	0.0009403	Param Intra 1 of 2
Chloride (mg/L)	YGWC-43	2.241	n/a	3/28/2019	1.8	No	8	0	No	0.0009403	Param Intra 1 of 2
pH (S.U.)	YGWC-38	5.214	4.411	3/27/2019	4.79	No	8	0	No	0.0004701	Param Intra 1 of 2
pH (S.U.)	YGWA-39	7.75	5.045	3/27/2019	5.84	No	8	0	No	0.0004701	Param Intra 1 of 2
pH (S.U.)	YGWA-40	6.187	4.438	3/26/2019	5.3	No	8	0	No	0.0004701	Param Intra 1 of 2
pH (S.U.)	YGWC-41	5.478	4.262	3/28/2019	5	No	8	0	No	0.0004701	Param Intra 1 of 2
pH (S.U.)	YGWC-42	6.618	4.937	3/27/2019	5.57	No	8	0	No	0.0004701	Param Intra 1 of 2
pH (S.U.)	YGWC-43	7.864	4.971	3/28/2019	5.96	No	8	0	No	0.0004701	Param Intra 1 of 2

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.3, Std. Dev.=0.4957, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9518, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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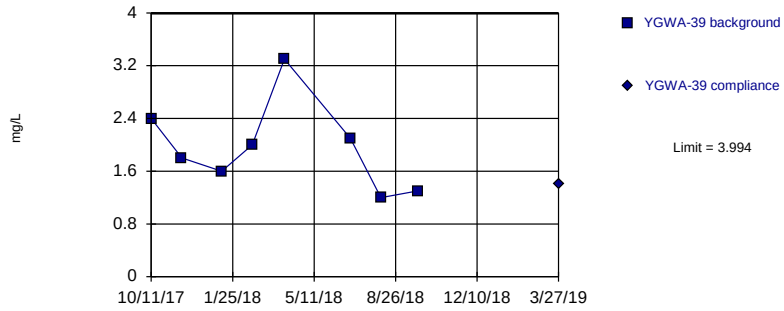
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.963, Std. Dev.=0.6739, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9278, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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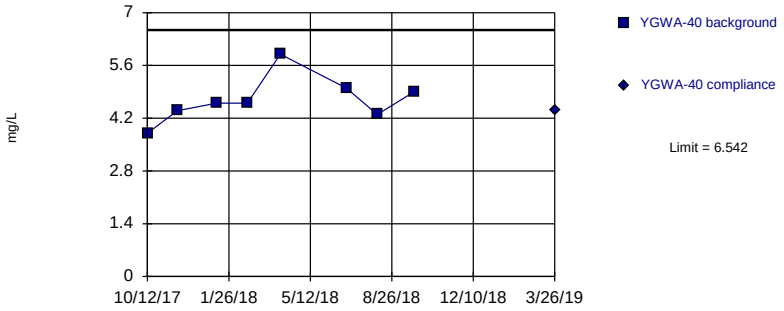
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.688, Std. Dev.=0.6151, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9419, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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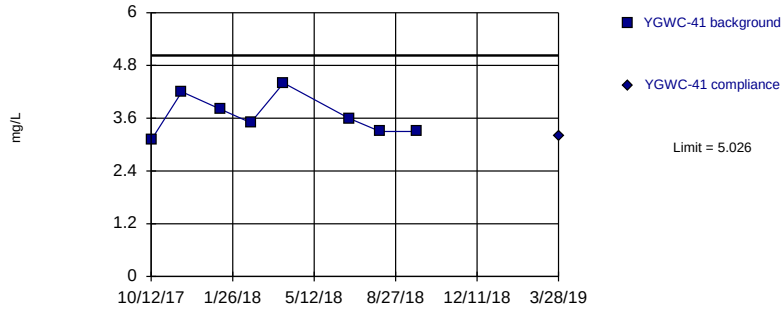
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3.65, Std. Dev.=0.4567, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9285, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

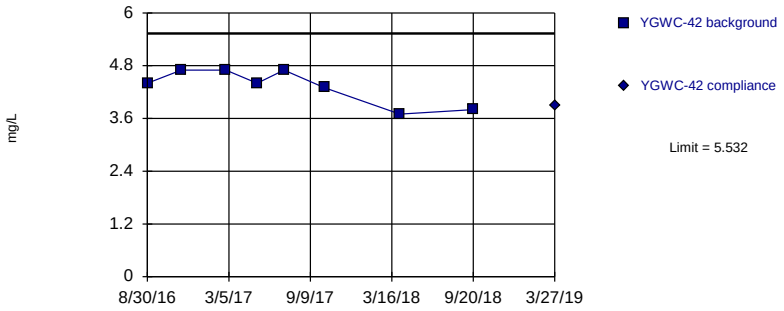
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.338, Std. Dev.=0.3962, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8382, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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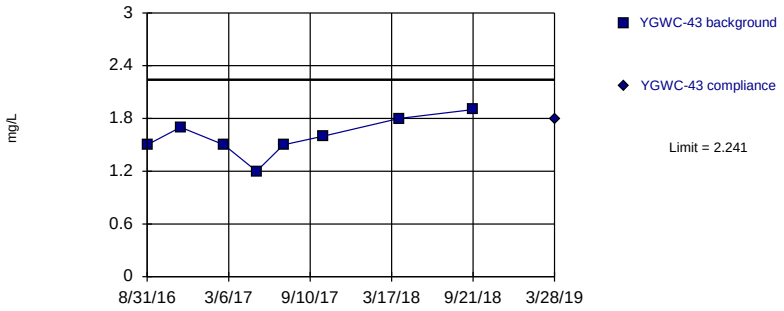
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.588, Std. Dev.=0.2167, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9506, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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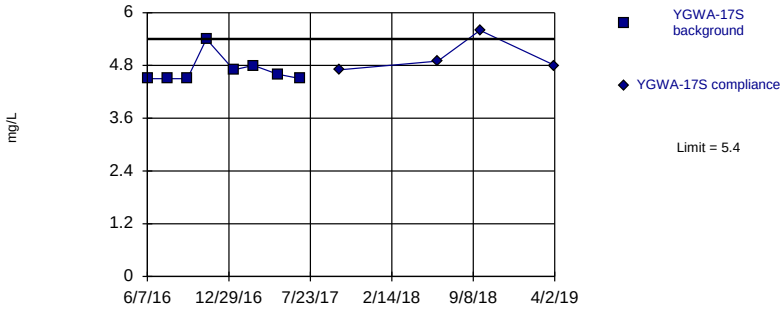
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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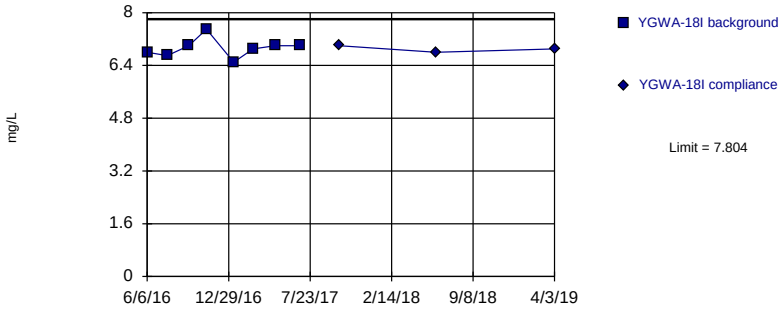
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.925, Std. Dev.=0.2915, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9218, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

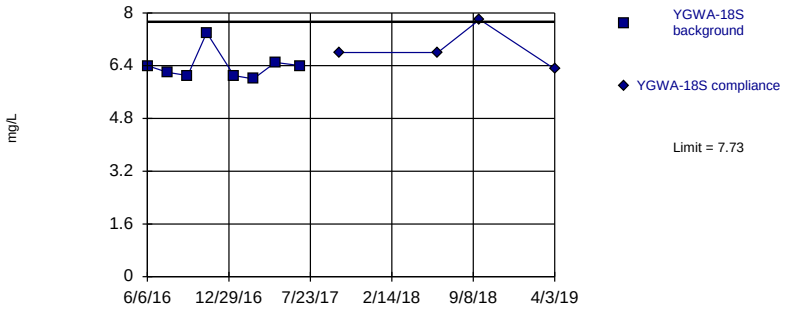
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.388, Std. Dev.=0.4454, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7749, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

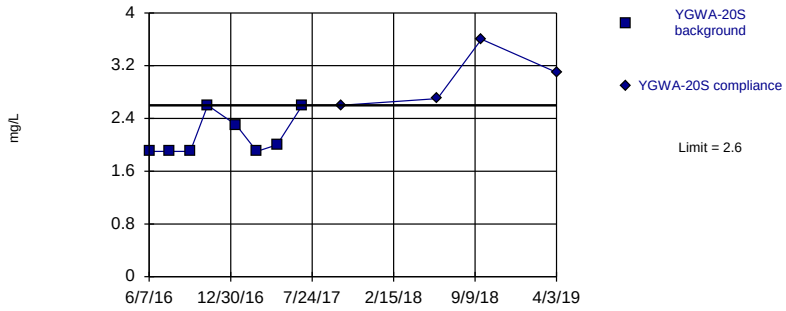
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Exceeds Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2). Insufficient data to test for seasonality: data were not deseasonalized.

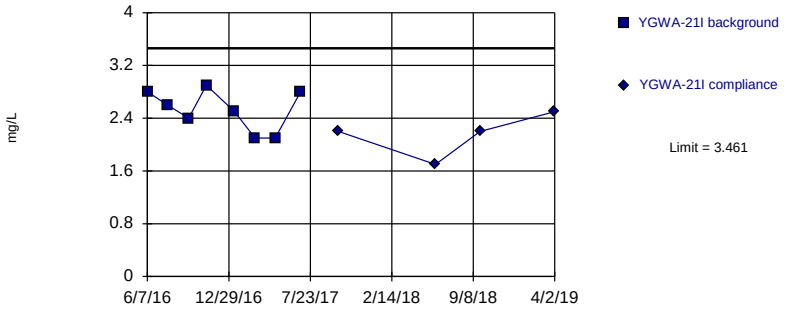
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.525, Std. Dev.=0.3105, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9036, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

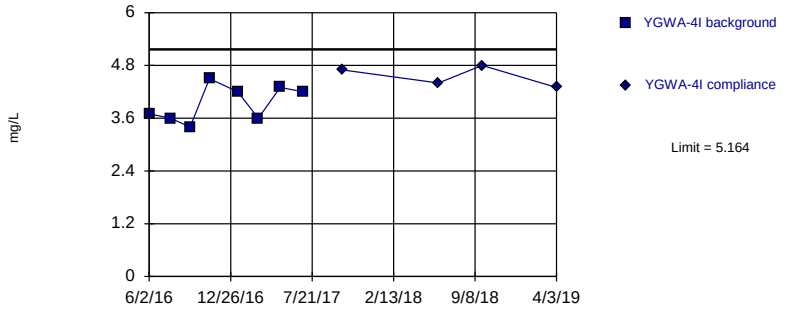
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3.938, Std. Dev.=0.4069, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8976, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

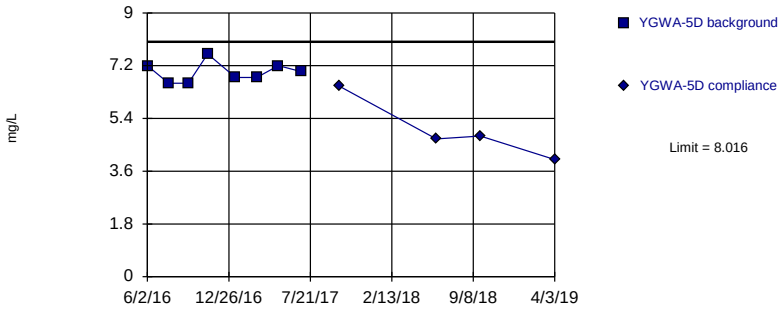
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.975, Std. Dev.=0.3454, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.919, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

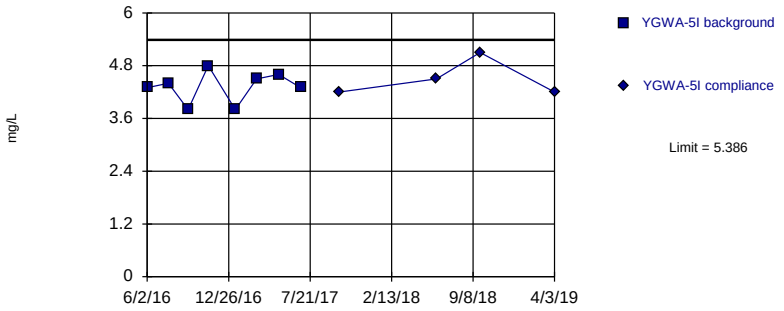
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.313, Std. Dev.=0.3563, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9089, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

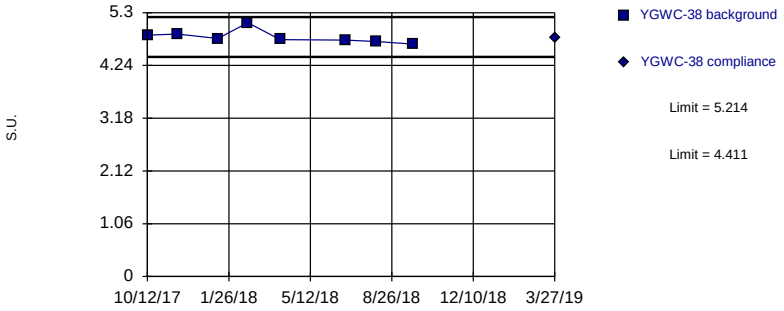
Constituent: Chloride Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.813, Std. Dev.=0.1331, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8587, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

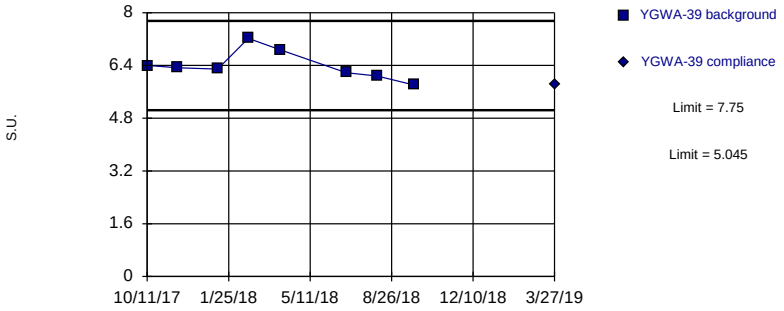
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.398, Std. Dev.=0.4487, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9285, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

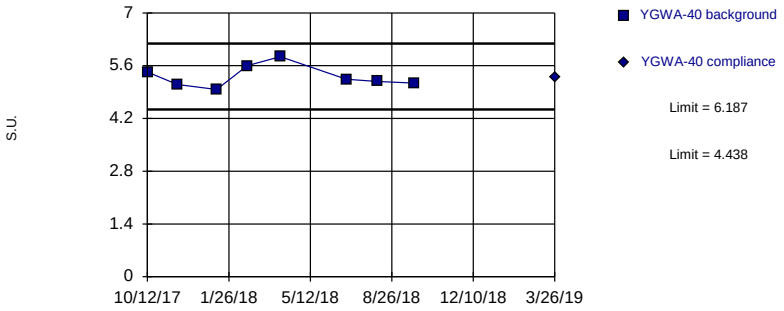
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.313, Std. Dev.=0.2903, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9251, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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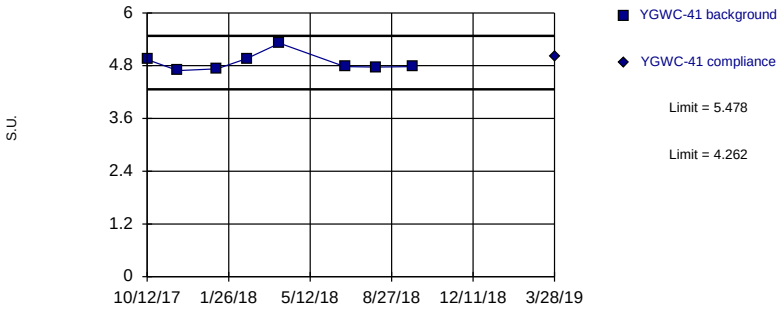
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.87, Std. Dev.=0.2017, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.801, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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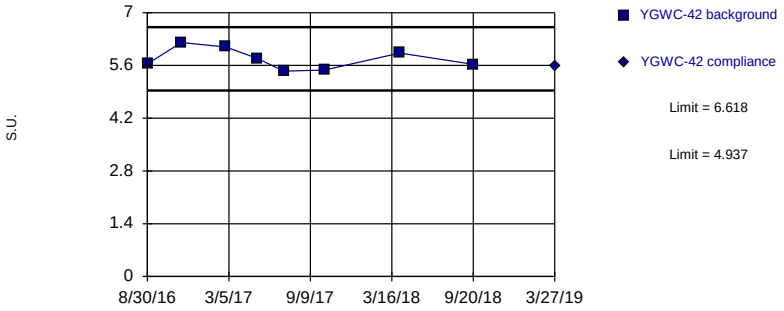
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.778, Std. Dev.=0.2789, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9353, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

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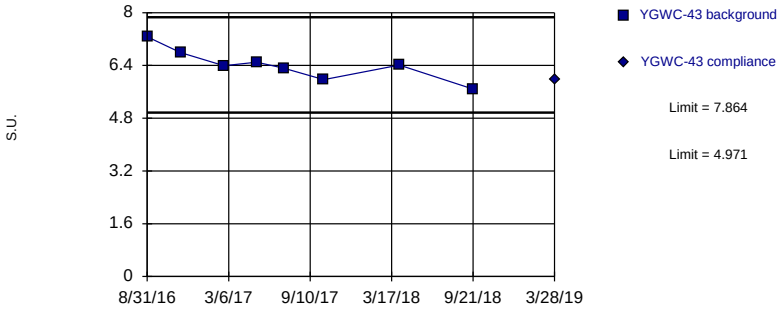
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.418, Std. Dev.=0.4799, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9664, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

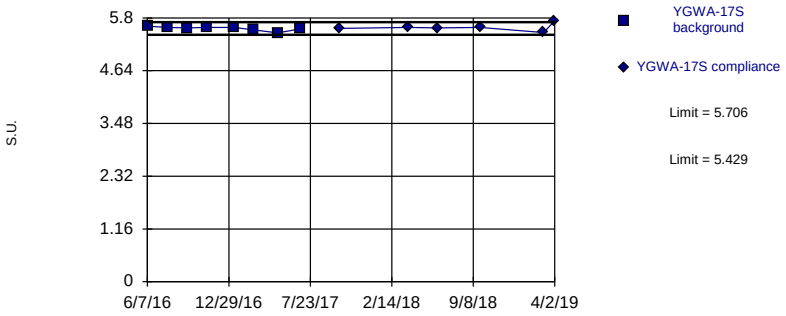
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Exceeds Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.568, Std. Dev.=0.0459, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8564, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

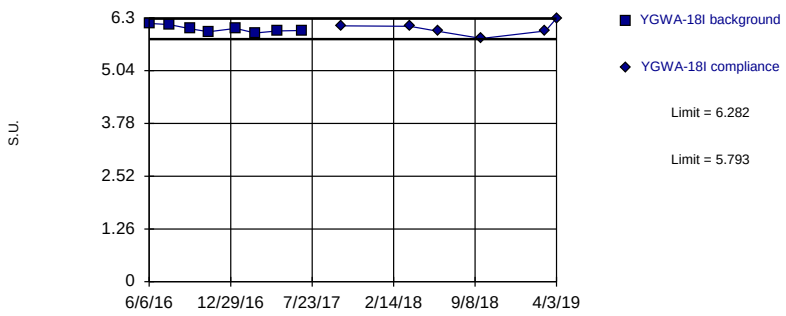
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Exceeds Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.038, Std. Dev.=0.08102, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9207, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

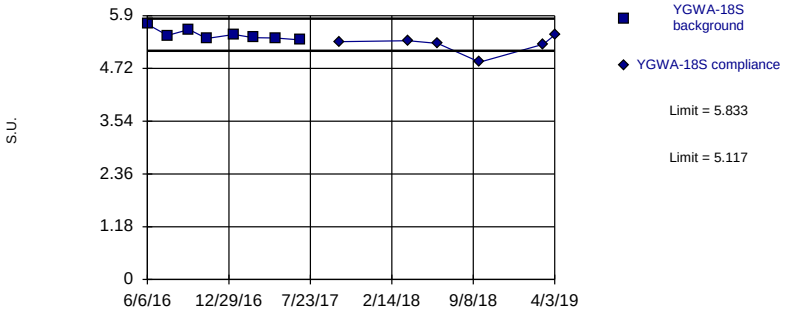
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.475, Std. Dev.=0.1189, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8604, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

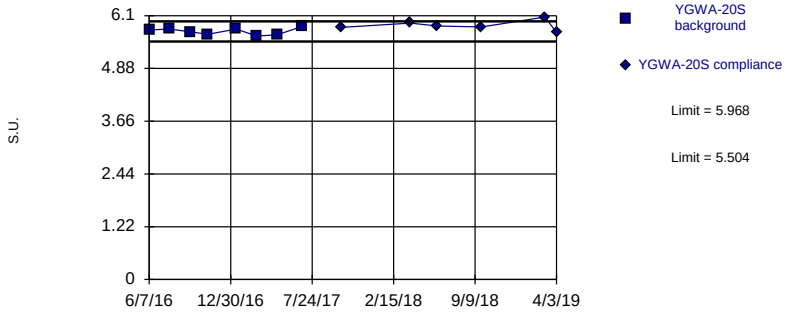
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.736, Std. Dev.=0.07689, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9419, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

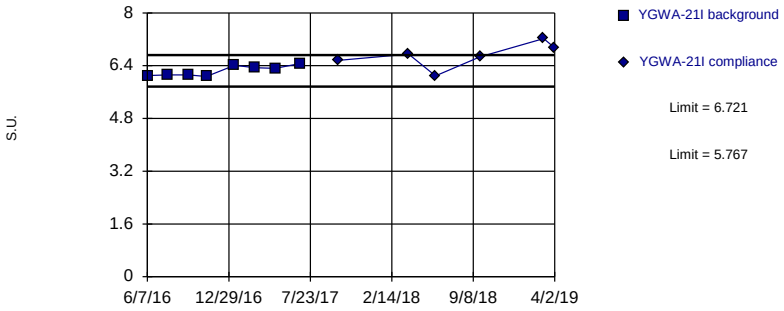
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Exceeds Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.244, Std. Dev.=0.1583, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.866, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

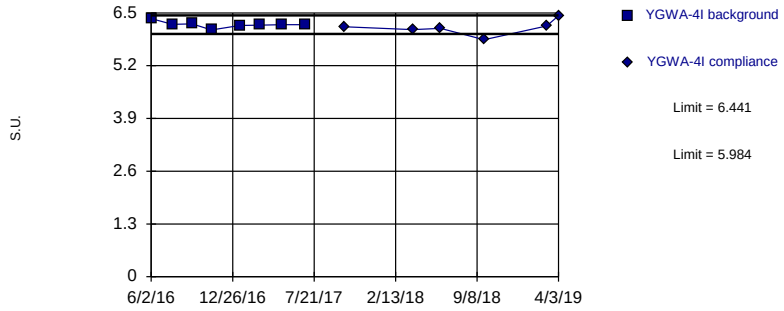
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.213, Std. Dev.=0.07592, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8537, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

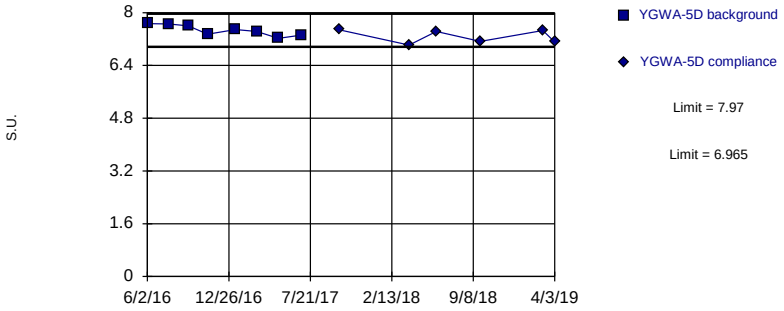
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.468, Std. Dev.=0.1666, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9375, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

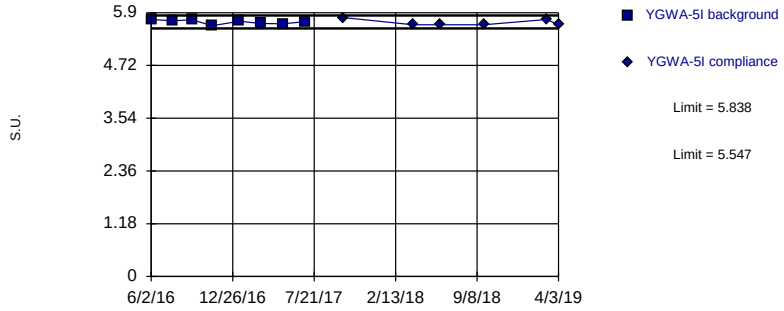
Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.693, Std. Dev.=0.04833, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9438, critical = 0.749. Kappa = 3.014 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.0009403.

Constituent: pH Analysis Run 6/27/2019 5:27 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-38	YGWC-38
10/12/2017	6	
11/20/2017	6.9	
1/12/2018	6.6	
2/20/2018	6.2	
4/3/2018	6.9	
6/28/2018	6.4	
8/7/2018	5.5	
9/24/2018	5.9	
3/27/2019		6.2

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-39	YGWA-39
10/11/2017	2.4	
11/20/2017	1.8	
1/11/2018	1.6	
2/20/2018	2	
4/3/2018	3.3	
6/28/2018	2.1	
8/7/2018	1.2	
9/24/2018	1.3	
3/27/2019		1.4

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-40	YGWA-40
10/12/2017	3.8	
11/20/2017	4.4	
1/10/2018	4.6	
2/19/2018	4.6	
4/3/2018	5.9	
6/28/2018	5	
8/7/2018	4.3	
9/24/2018	4.9	
3/26/2019		4.4

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-41	YGWC-41
10/12/2017	3.1	
11/21/2017	4.2	
1/11/2018	3.8	
2/19/2018	3.5	
4/3/2018	4.4	
6/27/2018	3.6	
8/7/2018	3.3	
9/24/2018	3.3	
3/28/2019		3.2

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-42	YGWC-42
8/30/2016	4.4	
11/16/2016	4.7	
2/27/2017	4.7	
5/10/2017	4.4	
7/11/2017	4.7	
10/12/2017	4.3	
4/4/2018	3.7	
9/20/2018	3.8	
3/27/2019		3.9

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWC-43
8/31/2016	1.5	
11/16/2016	1.7	
2/24/2017	1.5	
5/10/2017	1.2	
7/11/2017	1.5	
10/12/2017	1.6	
4/4/2018	1.8	
9/20/2018	1.9	
3/28/2019		1.8

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-17S	YGWA-17S
6/7/2016	4.5	
7/27/2016	4.5	
9/16/2016	4.5	
11/3/2016	5.4	
1/11/2017	4.7	
3/2/2017	4.8	
5/2/2017	4.6	
6/29/2017	4.5	
10/4/2017		4.7
6/11/2018		4.9
9/25/2018		5.6
4/2/2019		4.8

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-18I	YGWA-18I
6/6/2016	6.8	
7/27/2016	6.7	
9/19/2016	7	
11/3/2016	7.5	
1/11/2017	6.5	
3/1/2017	6.9	
4/26/2017	7	
6/28/2017	7	
10/5/2017		7
6/7/2018		6.8
9/25/2018	7.9 (o)	
4/3/2019		6.9

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-18S	YGWA-18S
6/6/2016	6.4	
7/27/2016	6.2	
9/16/2016	6.1	
11/3/2016	7.4	
1/11/2017	6.1	
3/1/2017	6	
4/26/2017	6.5	
6/28/2017	6.4	
10/4/2017		6.8
6/11/2018		6.8
9/25/2018		7.8
4/3/2019		6.3

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-20S	YGWA-20S
6/7/2016	1.9	
7/27/2016	1.9	
9/19/2016	1.9	
11/2/2016	2.6	
1/13/2017	2.3	
3/6/2017	1.9	
4/26/2017	2	
6/29/2017	2.6	
10/4/2017		2.6
6/6/2018		2.7
9/25/2018		3.6
4/3/2019		3.1

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-21I	YGWA-21I
6/7/2016	2.8	
7/28/2016	2.6	
9/19/2016	2.4	
11/3/2016	2.9	
1/13/2017	2.5	
3/6/2017	2.1	
4/26/2017	2.1	
6/29/2017	2.8	
10/3/2017		2.2
6/5/2018		1.7
9/25/2018		2.2
4/2/2019		2.5

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I	YGWA-4I
6/2/2016	3.7	
7/26/2016	3.6	
9/14/2016	3.4	
11/2/2016	4.5	
1/13/2017	4.2	
3/6/2017	3.6	
5/1/2017	4.3	
6/29/2017	4.2	
10/5/2017		4.7
6/7/2018		4.4
9/26/2018		4.8
4/3/2019		4.3

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-5D	YGWA-5D
6/2/2016	7.2	
7/26/2016	6.6	
9/14/2016	6.6	
11/2/2016	7.6	
1/12/2017	6.8	
3/7/2017	6.8	
5/1/2017	7.2	
6/27/2017	7	
10/3/2017		6.5
6/6/2018		4.7
9/26/2018		4.8
4/3/2019		4

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-5I	YGWA-5I
6/2/2016	4.3	
7/26/2016	4.4	
9/14/2016	3.8	
11/4/2016	4.8	
1/12/2017	3.8	
3/7/2017	4.5	
5/2/2017	4.6	
6/27/2017	4.3	
10/3/2017		4.2
6/7/2018		4.5
9/26/2018		5.1
4/3/2019		4.2

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-38	YGWC-38
10/12/2017	4.85	
11/20/2017	4.87	
1/12/2018	4.78	
2/20/2018	5.1	
4/3/2018	4.76	
6/28/2018	4.75	
8/7/2018	4.72	
9/24/2018	4.67	
3/27/2019		4.79

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-39	YGWA-39
10/11/2017	6.4	
11/20/2017	6.33	
1/11/2018	6.29	
2/20/2018	7.22	
4/3/2018	6.87	
6/28/2018	6.18	
8/7/2018	6.08	
9/24/2018	5.81	
3/27/2019		5.84

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-40	YGWA-40
10/12/2017	5.43	
11/20/2017	5.1	
1/10/2018	4.97	
2/19/2018	5.6	
4/3/2018	5.84	
6/28/2018	5.24	
8/7/2018	5.18	
9/24/2018	5.14	
3/26/2019		5.3

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-41	YGWC-41
10/12/2017	4.94	
11/21/2017	4.69	
1/11/2018	4.73	
2/19/2018	4.96	
4/3/2018	5.31	
6/27/2018	4.78	
8/7/2018	4.77	
9/24/2018	4.78	
3/28/2019		5

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-42	YGWC-42
8/30/2016	5.64	
11/16/2016	6.21	
2/27/2017	6.09	
5/10/2017	5.79	
7/11/2017	5.45	
10/12/2017	5.48	
4/4/2018	5.93	
9/20/2018	5.63	
3/27/2019		5.57

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWC-43
8/31/2016	7.27	
11/16/2016	6.79	
2/24/2017	6.39	
5/10/2017	6.5	
7/11/2017	6.32	
10/12/2017	5.97	
4/4/2018	6.41	
9/20/2018	5.69	
3/28/2019		5.96

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-17S	YGWA-17S
6/7/2016	5.62	
7/27/2016	5.59	
9/16/2016	5.58	
11/3/2016	5.59	
1/11/2017	5.59	
3/2/2017	5.54	
5/2/2017	5.47	
6/29/2017	5.56	
10/4/2017		5.57
3/28/2018		5.59
6/11/2018		5.58
9/25/2018		5.59
3/5/2019		5.48
4/2/2019		5.74

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-18I	YGWA-18I
6/6/2016	6.17	
7/27/2016	6.14	
9/19/2016	6.04	
11/3/2016	5.97	
1/11/2017	6.05	
3/1/2017	5.94	
4/26/2017	5.99	
6/28/2017	6	
10/5/2017		6.11
3/28/2018		6.1
6/7/2018		5.98
9/25/2018		5.81
3/6/2019		5.99
4/3/2019		6.29

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-18S	YGWA-18S
6/6/2016	5.71	
7/27/2016	5.46	
9/19/2016	5.59	
11/3/2016	5.39	
1/11/2017	5.48	
3/1/2017	5.41	
4/26/2017	5.4	
6/28/2017	5.36	
10/4/2017		5.32
3/28/2018		5.34
6/11/2018		5.28
9/25/2018		4.86
3/5/2019		5.26
4/3/2019		5.47

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-20S	YGWA-20S
6/7/2016	5.77	
7/27/2016	5.79	
9/19/2016	5.73	
11/2/2016	5.67	
1/13/2017	5.79	
3/6/2017	5.63	
4/26/2017	5.66	
6/29/2017	5.85	
10/4/2017		5.83
3/29/2018		5.93
6/6/2018		5.86
9/25/2018		5.84
3/5/2019		6.07
4/3/2019		5.71

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-21I	YGWA-21I
6/7/2016	6.1	
7/28/2016	6.12	
9/19/2016	6.12	
11/3/2016	6.07	
1/13/2017	6.41	
3/6/2017	6.34	
4/26/2017	6.32	
6/29/2017	6.47	
10/3/2017		6.56
3/29/2018		6.75
6/5/2018		6.09
9/25/2018		6.67
3/5/2019		7.22
4/2/2019		6.94

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I	YGWA-4I
6/2/2016	6.36	
7/26/2016	6.22	
9/14/2016	6.23	
11/2/2016	6.08	
1/13/2017	6.19	
3/6/2017	6.2	
5/1/2017	6.21	
6/29/2017	6.21	
10/5/2017		6.16
3/29/2018		6.09
6/7/2018		6.12
9/26/2018		5.84
3/4/2019		6.18
4/3/2019		6.43

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-5D	YGWA-5D
6/2/2016	7.67	
7/26/2016	7.66	
9/14/2016	7.6	
11/2/2016	7.35	
1/12/2017	7.49	
3/7/2017	7.43	
5/1/2017	7.22	
6/27/2017	7.32	
10/3/2017		7.48
3/29/2018		7.02
6/6/2018		7.43
9/26/2018		7.13
3/4/2019		7.46
4/3/2019		7.11

Prediction Limit

Constituent: pH (S.U.) Analysis Run 6/27/2019 5:32 PM View: Yates R6 - Intrawell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-5I	YGWA-5I
6/2/2016	5.75	
7/26/2016	5.72	
9/14/2016	5.74	
11/4/2016	5.61	
1/12/2017	5.71	
3/7/2017	5.66	
5/2/2017	5.65	
6/27/2017	5.7	
10/3/2017		5.79
3/29/2018		5.63
6/7/2018		5.63
9/26/2018		5.63
3/4/2019		5.75
4/3/2019		5.63

Interwell Prediction Limit

Plant Yates Client: Southern Company Data: Yates R6 Printed 6/27/2019, 5:19 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Trans...	Alpha	Method
Boron (mg/L)	**YGWC-38**	**0.16**	**n/a**	**3/27/2019**	**16.7**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-41**	**0.16**	**n/a**	**3/28/2019**	**7.1**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-42**	**0.16**	**n/a**	**3/27/2019**	**20.3**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-43**	**0.16**	**n/a**	**3/28/2019**	**1.8**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**YGWC-38**	**37**	**n/a**	**3/27/2019**	**155**	**Yes**	**114**	**0.8772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	YGWC-41	37	n/a	3/28/2019	26	No	114	0.8772	n/a	0.0001522	NP Inter (normality) 1 of 2
Calcium (mg/L)	**YGWC-42**	**37**	**n/a**	**3/27/2019**	**109**	**Yes**	**114**	**0.8772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	YGWC-43	37	n/a	3/28/2019	8.9	No	114	0.8772	n/a	0.0001522	NP Inter (normality) 1 of 2
Fluoride (mg/L)	YGWC-38	0.32	n/a	3/27/2019	0.24	No	130	87.69	n/a	0.0001172	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-41	0.32	n/a	3/28/2019	0.1	No	130	87.69	n/a	0.0001172	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-42	0.32	n/a	3/27/2019	-0.3ND	No	130	87.69	n/a	0.0001172	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-43	0.32	n/a	3/28/2019	0.078	No	130	87.69	n/a	0.0001172	NP Inter (NDs) 1 of 2
Sulfate (mg/L)	**YGWC-38**	**71**	**n/a**	**3/27/2019**	**851**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-41**	**71**	**n/a**	**3/28/2019**	**258**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-42**	**71**	**n/a**	**3/27/2019**	**831**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-43**	**71**	**n/a**	**3/28/2019**	**181**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (m...	**YGWC-38**	**186.8**	**n/a**	**3/27/2019**	**1190**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-41**	**186.8**	**n/a**	**3/28/2019**	**372**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-42**	**186.8**	**n/a**	**3/27/2019**	**1100**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-43**	**186.8**	**n/a**	**3/28/2019**	**323**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**

Interwell Prediction Limit

Plant Yates Client: Southern Company Data: Yates R6 Printed 6/27/2019, 5:19 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Trans...	Alpha	Method
Boron (mg/L)	**YGWC-38**	**0.16**	**n/a**	**3/27/2019**	**16.7**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-41**	**0.16**	**n/a**	**3/28/2019**	**7.1**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-42**	**0.16**	**n/a**	**3/27/2019**	**20.3**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-43**	**0.16**	**n/a**	**3/28/2019**	**1.8**	**Yes**	**108**	**45.37**	**n/a**	**0.0001696**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**YGWC-38**	**37**	**n/a**	**3/27/2019**	**155**	**Yes**	**114**	**0.8772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	**YGWC-42**	**37**	**n/a**	**3/27/2019**	**109**	**Yes**	**114**	**0.8772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-38**	**71**	**n/a**	**3/27/2019**	**851**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-41**	**71**	**n/a**	**3/28/2019**	**258**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-42**	**71**	**n/a**	**3/27/2019**	**831**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-43**	**71**	**n/a**	**3/28/2019**	**181**	**Yes**	**114**	**8.772**	**n/a**	**0.0001522**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (m...	**YGWC-38**	**186.8**	**n/a**	**3/27/2019**	**1190**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-41**	**186.8**	**n/a**	**3/28/2019**	**372**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-42**	**186.8**	**n/a**	**3/27/2019**	**1100**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**
Total Dissolved Solids (m...	**YGWC-43**	**186.8**	**n/a**	**3/28/2019**	**323**	**Yes**	**114**	**0**	**sqrt(x)**	**0.0009403**	**Param Inter 1 of 2**

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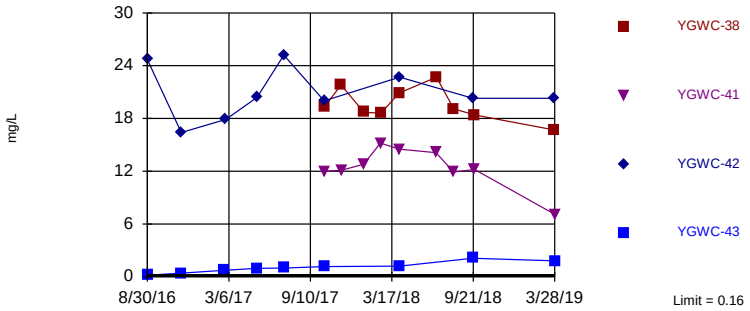
Exceeds Limit: YGWC-38, YGWC-41, YGWC-42, YGWC-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 108 background values. 45.37% NDs. Annual per-constituent alpha = 0.00271. Individual comparison alpha = 0.0001696 (1 of 2). Comparing 4 points to limit. Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 6/27/2019 5:17 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

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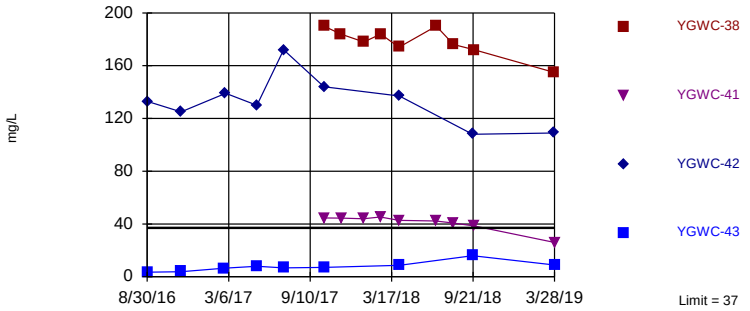
Exceeds Limit: YGWC-38, YGWC-42

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 114 background values. 0.8772% NDs. Annual per-constituent alpha = 0.002432. Individual comparison alpha = 0.0001522 (1 of 2). Comparing 4 points to limit. Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: Calcium Analysis Run 6/27/2019 5:17 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

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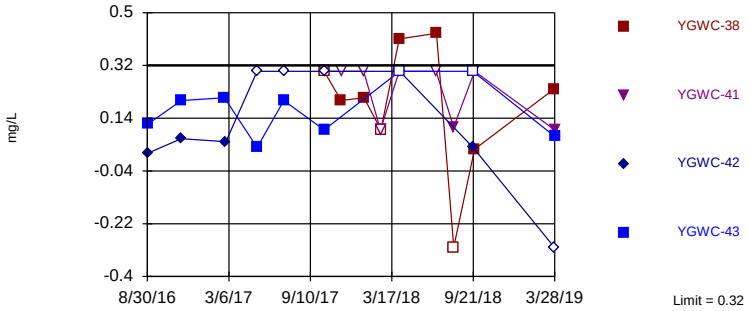
Hollow symbols indicate censored values.

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 130 background values. 87.69% NDs. Annual per-constituent alpha = 0.001873. Individual comparison alpha = 0.0001172 (1 of 2). Comparing 4 points to limit. Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 6/27/2019 5:17 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

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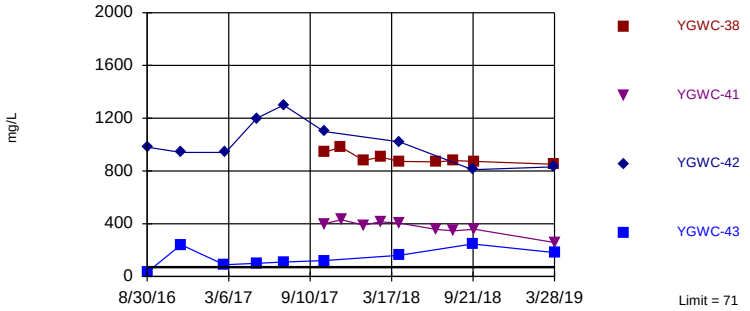
Exceeds Limit: YGWC-38, YGWC-41, YGWC-42, YGWC-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 114 background values. 8.772% NDs. Annual per-constituent alpha = 0.002432. Individual comparison alpha = 0.0001522 (1 of 2). Comparing 4 points to limit. Assumes 4 future values. Seasonality was not detected with 95% confidence.

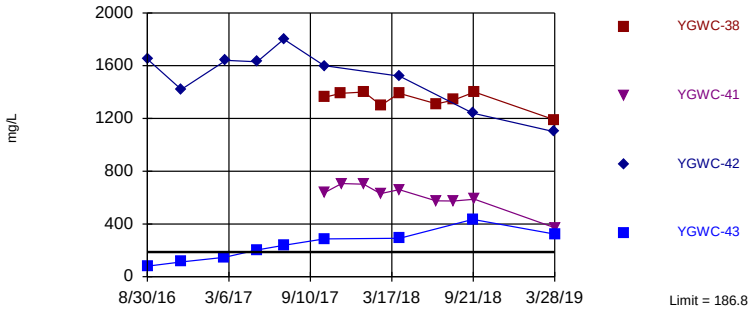
Constituent: Sulfate Analysis Run 6/27/2019 5:17 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

Exceeds Limit: YGWC-38, YGWC-41, YGWC-42, YGWC-43

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=9.647, Std. Dev.=2.105, n=114. Seasonality was not detected with 95% confidence. Normality test: Chi Squared @alpha = 0.01, calculated = 7.93, critical = 14.07. Kappa = 1.91 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 4 points to limit. Assumes 4 future values.

Constituent: Total Dissolved Solids Analysis Run 6/27/2019 5:17 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-42
6/2/2016	<0.05	<0.05				<0.05 (o)			
6/6/2016			<0.05				<0.05 (o)		
6/7/2016				<0.05	<0.05			<0.05 (o)	
7/26/2016	0.0047 (J)	<0.1				0.0052 (J)			
7/27/2016			<0.1	<0.1			0.0059 (J)	0.008 (J)	
7/28/2016					<0.1 (*)				
8/30/2016									24.7
8/31/2016									
9/14/2016	<0.1	0.01 (J)				0.0071 (J)			
9/16/2016							0.0079 (J)	0.0086 (J)	
9/19/2016			<0.1	<0.1	<0.1				
11/2/2016	<0.1			<0.1		<0.1 (o)			
11/3/2016			<0.1		<0.1		0.0082 (J)	0.0077 (J)	
11/4/2016		<0.1							
11/16/2016									16.4
1/11/2017			<0.04				0.0096 (J)	0.0092 (J)	
1/12/2017		<0.04				0.0076 (J)			
1/13/2017	<0.04			<0.04	<0.04				
2/24/2017									
2/27/2017									17.9
3/1/2017			<0.04				<0.04 (o)		
3/2/2017								0.0095 (J)	
3/6/2017	<0.04			<0.04	<0.04				
3/7/2017		<0.04				0.0089 (J)			
4/26/2017			<0.04	<0.04	<0.04		0.0091 (J)		
5/1/2017	<0.04					0.0061 (J)			
5/2/2017		<0.04						<0.04 (o)	
5/10/2017									20.4
6/27/2017		<0.04				0.0079 (J)			
6/28/2017			<0.04				0.0079 (J)		
6/29/2017	<0.04			<0.04	<0.04			0.0074 (J)	
7/11/2017									25.2
10/3/2017		<0.04			<0.04	0.0094 (J)			
10/4/2017				<0.04			0.009 (J)	0.0077 (J)	
10/5/2017	<0.04		<0.04						
10/11/2017									
10/12/2017									20
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									22.7
6/5/2018					0.0092 (J)				
6/6/2018				0.0049 (J)		0.0098 (J)			
6/7/2018	0.0045 (J)	<0.04	<0.04						
6/11/2018							0.0093 (J)	0.01 (J)	
6/27/2018									
6/28/2018									

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-42
8/7/2018									
9/20/2018									20.3
9/24/2018									
9/25/2018			0.0046 (J)	<0.04	0.0054 (J)		0.007 (J)	0.0096 (J)	
9/26/2018	0.005 (J)	0.0057 (J)				0.01 (J)			
3/26/2019									
3/27/2019									20.3
3/28/2019									
4/2/2019					0.011 (J)			0.0066 (J)	
4/3/2019	0.0055 (J)	0.0044 (J)	<0.04	<0.04		0.0076 (J)	0.0053 (J)		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWC-38	YGWC-41	YGWA-40 (bg)
6/2/2016					
6/6/2016					
6/7/2016					
7/26/2016					
7/27/2016					
7/28/2016					
8/30/2016					
8/31/2016	0.169				
9/14/2016					
9/16/2016					
9/19/2016					
11/2/2016					
11/3/2016					
11/4/2016					
11/16/2016	0.406				
1/11/2017					
1/12/2017					
1/13/2017					
2/24/2017	0.725				
2/27/2017					
3/1/2017					
3/2/2017					
3/6/2017					
3/7/2017					
4/26/2017					
5/1/2017					
5/2/2017					
5/10/2017	0.955				
6/27/2017					
6/28/2017					
6/29/2017					
7/11/2017	0.994				
10/3/2017					
10/4/2017					
10/5/2017					
10/11/2017		0.0135 (J)			
10/12/2017	1.15		19.3	12	0.0401
11/20/2017		0.0251 (J)	21.8		0.156
11/21/2017				12.1	
1/10/2018					0.15
1/11/2018		0.0255 (J)		12.8	
1/12/2018			18.7		
2/19/2018				15.2	0.146
2/20/2018		<0.04	18.6		
4/3/2018		0.033 (J)	20.9	14.5	0.12
4/4/2018	1.2				
6/5/2018					
6/6/2018					
6/7/2018					
6/11/2018					
6/27/2018				14.1	
6/28/2018		0.053	22.7		0.16

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWC-38	YGWC-41	YGWA-40 (bg)
8/7/2018		0.024 (J)	19.1	11.9	0.12
9/20/2018	2.1				
9/24/2018		0.028 (J)	18.4	12.2	0.099
9/25/2018					
9/26/2018					
3/26/2019					0.096
3/27/2019		0.017 (J)	16.7		
3/28/2019	1.8			7.1	
4/2/2019					
4/3/2019					

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWC-42
6/2/2016	8.8	2.4	33						
6/6/2016				6.2	1.4				
6/7/2016						2.2	2.3	3.7	
7/26/2016	7.69	2.12	32.3						
7/27/2016				4.73	1.19	2	2.08		
7/28/2016								3.15	
8/30/2016									133
8/31/2016									
9/14/2016	8.49	2.18	31						
9/16/2016					1.5	1.97			
9/19/2016				4.76			1.97	3.17	
11/2/2016	7.83		30.9				2.13		
11/3/2016				5.25	1.31	1.99		3.4	
11/4/2016		2.17 (J)							
11/16/2016									125
1/11/2017				4.74	1.25	2.28			
1/12/2017		2.37	35.7						
1/13/2017	8.08						2.45	4.98	
2/24/2017									
2/27/2017									139
3/1/2017				5.37	1.26				
3/2/2017						2.15			
3/6/2017	8.64						2.48	6.28	
3/7/2017		2.34	32.7						
4/26/2017				4.28	1.05		2.3	6.65	
5/1/2017	13.4		37						
5/2/2017		2.17				1.95			
5/10/2017									130
6/27/2017		2.13	36.5						
6/28/2017				4.95	1.06				
6/29/2017	8.81					2.02	2.54	6.04	
7/11/2017									172
10/3/2017		2.15	30.9					8.28	
10/4/2017					1.1	2.03	2.25		
10/5/2017	9.29			5.28					
10/11/2017									
10/12/2017									144
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									137
6/5/2018								9.1	
6/6/2018			26.2				2.3		
6/7/2018	8.2	2.3		4.8					
6/11/2018					1.4	2.1			
6/27/2018									
6/28/2018									

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWC-42
8/7/2018									
9/20/2018									108
9/24/2018									
9/25/2018				4.6	1	2.1	2.3	10.4 (J)	
9/26/2018	9.5 (J)	2.3	25.8						
3/26/2019									
3/27/2019									109
3/28/2019									
4/2/2019						2.5		8.8	
4/3/2019	8.4	2.8	24.7 (J)	5.3	1.2		2.9		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-38
6/2/2016					
6/6/2016					
6/7/2016					
7/26/2016					
7/27/2016					
7/28/2016					
8/30/2016					
8/31/2016	3.4				
9/14/2016					
9/16/2016					
9/19/2016					
11/2/2016					
11/3/2016					
11/4/2016					
11/16/2016	3.79				
1/11/2017					
1/12/2017					
1/13/2017					
2/24/2017	6.42				
2/27/2017					
3/1/2017					
3/2/2017					
3/6/2017					
3/7/2017					
4/26/2017					
5/1/2017					
5/2/2017					
5/10/2017	7.9				
6/27/2017					
6/28/2017					
6/29/2017					
7/11/2017	6.71				
10/3/2017					
10/4/2017					
10/5/2017					
10/11/2017		2.74			
10/12/2017	7.05		2.9	44.5	190
11/20/2017		1.81	10.4		184
11/21/2017				44.4	
1/10/2018			10.2		
1/11/2018		1.54		43.9	
1/12/2018					178
2/19/2018			<25	45.3	
2/20/2018		1.71			184
4/3/2018		1.4	6.3	42.7	174
4/4/2018	8.6				
6/5/2018					
6/6/2018					
6/7/2018					
6/11/2018					
6/27/2018				42.2	
6/28/2018		1.4	6.7		190

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-38
8/7/2018		1.2	6.3	40.7	176
9/20/2018	15.9 (J)				
9/24/2018		1.1	5.7	38.5	172
9/25/2018					
9/26/2018					
3/26/2019			5.6		
3/27/2019		1.5			155
3/28/2019	8.9			26	
4/2/2019					
4/3/2019					

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWC-42
6/2/2016	<0.2	0.11 (J)	<0.2						
6/6/2016				<0.2	<0.2				
6/7/2016						<0.2	<0.2	<0.2	
7/26/2016	<0.3	0.05 (J)	<0.3						
7/27/2016				<0.3	<0.3		<0.3	<0.3	
7/28/2016						0.02 (J)			
8/30/2016									0.02 (J)
8/31/2016									
9/14/2016	<0.3	0.04 (J)	<0.3						
9/16/2016				<0.3			<0.3		
9/19/2016					<0.3	0.02 (J)		<0.3	
11/2/2016	<0.3 (*)	<0.3 (*)						<0.3	
11/3/2016				<0.3	<0.3	<0.3 (*)	<0.3		
11/4/2016			<0.3						
11/16/2016									0.07 (J)
1/11/2017				<0.3	<0.3		<0.3		
1/12/2017		0.04 (J)	<0.3						
1/13/2017	<0.3					<0.3		<0.3	
2/24/2017									
2/27/2017									0.06 (J)
3/1/2017				<0.3 (*)	<0.3 (*)				
3/2/2017							<0.3 (*)		
3/6/2017	<0.3 (*)					<0.3 (*)		<0.3 (*)	
3/7/2017		<0.3 (*)	<0.3 (*)						
4/26/2017				<0.3	<0.3	0.04 (J)		<0.3	
5/1/2017	<0.3	<0.3 (*)							
5/2/2017			<0.3				<0.3		
5/10/2017									<0.3
6/27/2017		<0.3 (*)	<0.3						
6/28/2017				<0.3	<0.3				
6/29/2017	<0.3 (*)					<0.3 (*)	<0.3 (*)	<0.3 (*)	
7/11/2017									<0.3
10/3/2017		<0.3 (*)	<0.3			<0.3 (*)			
10/4/2017				<0.3			<0.3	<0.3	
10/5/2017	<0.3				<0.3				
10/11/2017									
10/12/2017									<0.3
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
3/28/2018				<0.3	<0.3		<0.3		
3/29/2018	<0.3	<0.3	<0.3			<0.3		<0.3	
4/3/2018									
4/4/2018									<0.3
6/5/2018						0.13 (J)			
6/6/2018		0.15 (J)						<0.3	
6/7/2018	<0.3		<0.3		<0.3				
6/11/2018				<0.3			<0.3		

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWC-42
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									0.041 (J)
9/24/2018									
9/25/2018				<0.3	<0.3	0 (J)	<0.3	<0.3	
9/26/2018	<0.3	<0.3	<0.3						
3/4/2019	<-0.3	0.19 (J)	<-0.3						
3/5/2019				<-0.3		0.32	<-0.3	<-0.3	
3/6/2019					<-0.3				
3/26/2019									
3/27/2019									<-0.3
3/28/2019									
4/2/2019						0.12 (J)	<0.3		
4/3/2019	<0.3	0.047 (J)	<0.3	<0.3	<0.3			<0.3	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWC-41	YGWA-40 (bg)	YGWC-38
6/2/2016					
6/6/2016					
6/7/2016					
7/26/2016					
7/27/2016					
7/28/2016					
8/30/2016					
8/31/2016	0.12 (J)				
9/14/2016					
9/16/2016					
9/19/2016					
11/2/2016					
11/3/2016					
11/4/2016					
11/16/2016	0.2 (J)				
1/11/2017					
1/12/2017					
1/13/2017					
2/24/2017	0.21 (J)				
2/27/2017					
3/1/2017					
3/2/2017					
3/6/2017					
3/7/2017					
4/26/2017					
5/1/2017					
5/2/2017					
5/10/2017	0.04 (J)				
6/27/2017					
6/28/2017					
6/29/2017					
7/11/2017	0.2 (J)				
10/3/2017					
10/4/2017					
10/5/2017					
10/11/2017		<0.3			
10/12/2017	0.1 (J)		<0.3	<0.3	<0.3
11/20/2017		<0.3		<0.3	0.2 (J)
11/21/2017			<0.3		
1/10/2018				<0.3	
1/11/2018		<0.3	<0.3		
1/12/2018					0.21 (J)
2/19/2018			<0.1	<0.1	
2/20/2018		0.23			<0.1
3/28/2018					
3/29/2018					
4/3/2018		<0.3	<0.3	<0.3	0.41
4/4/2018	<0.3				
6/5/2018					
6/6/2018					
6/7/2018					
6/11/2018					

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWC-41	YGWA-40 (bg)	YGWC-38
6/27/2018			<0.3		
6/28/2018		<0.3		<0.3	0.43
8/7/2018		0.048 (J)	0.11 (J)	<-0.3	<-0.3
9/20/2018	<0.3				
9/24/2018		<0.3	<0.3	<0.3	0.034 (J)
9/25/2018					
9/26/2018					
3/4/2019					
3/5/2019					
3/6/2019					
3/26/2019				<-0.3	
3/27/2019		<-0.3			0.24 (J)
3/28/2019	0.078 (J)		0.1 (J)		
4/2/2019					
4/3/2019					

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWC-42
6/2/2016	8	1.9	20						
6/6/2016				1.2	1.8				
6/7/2016						4.4	<1	5.2	
7/26/2016	7.7	1.8	20						
7/27/2016				1.7	1.9	4.7	0.08 (J)		
7/28/2016								5.1	
8/30/2016									980
8/31/2016									
9/14/2016	7.5	1.8	19						
9/16/2016					1.7	4.8			
9/19/2016				1.8			0.08 (J)	4.8	
11/2/2016	8.2		20				0.1 (J)		
11/3/2016				0.69 (J)	1.9	5.3		5	
11/4/2016		2							
11/16/2016									940
1/11/2017				<1 (*)	1.7	5.2			
1/12/2017		1.9	19						
1/13/2017	8.1						<1 (*)	4.3	
2/24/2017									
2/27/2017									940
3/1/2017				1.8	<1.6 (*)				
3/2/2017						5			
3/6/2017	8						<1	4.5	
3/7/2017		2.1	20						
4/26/2017				1.6	1.9		<1	4.9	
5/1/2017	8.4		20						
5/2/2017		2				5			
5/10/2017									1200
6/27/2017		2.1	18						
6/28/2017				<1.7 (*)	<1.5 (*)				
6/29/2017	9.2					5.2	<1 (*)	5.5	
7/11/2017									1300
10/3/2017		2.3	16					5.8	
10/4/2017					1.7	5.3	<1 (*)		
10/5/2017	9.6			1.6					
10/11/2017									
10/12/2017									1100
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									1020
6/5/2018								6.1	
6/6/2018			8.3				0.049 (J)		
6/7/2018	8.5	2		0.68 (J)					
6/11/2018					0.95 (J)	5.2			
6/27/2018									
6/28/2018									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWC-42
8/7/2018									
9/20/2018									810
9/24/2018									
9/25/2018				1	1.5	6.1	0.13 (J)	7	
9/26/2018	10.2	2.3	7.9						
3/26/2019									
3/27/2019									831
3/28/2019									
4/2/2019						5.1		3.8	
4/3/2019	8.5	2.1	7	0.82 (J)	1.3		0.12 (J)		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-38
6/2/2016					
6/6/2016					
6/7/2016					
7/26/2016					
7/27/2016					
7/28/2016					
8/30/2016					
8/31/2016	34				
9/14/2016					
9/16/2016					
9/19/2016					
11/2/2016					
11/3/2016					
11/4/2016					
11/16/2016	240				
1/11/2017					
1/12/2017					
1/13/2017					
2/24/2017	89				
2/27/2017					
3/1/2017					
3/2/2017					
3/6/2017					
3/7/2017					
4/26/2017					
5/1/2017					
5/2/2017					
5/10/2017	100				
6/27/2017					
6/28/2017					
6/29/2017					
7/11/2017	110				
10/3/2017					
10/4/2017					
10/5/2017					
10/11/2017		20			
10/12/2017	120		17	400	940
11/20/2017		24	71		980
11/21/2017				430	
1/10/2018			66		
1/11/2018		23		390	
1/12/2018					880
2/19/2018			57.2	414	
2/20/2018		20.6			905
4/3/2018		24.5	49.4	406	872
4/4/2018	160				
6/5/2018					
6/6/2018					
6/7/2018					
6/11/2018					
6/27/2018				357	
6/28/2018		22	43.8		869

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-43	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-38
8/7/2018		20.7	40.5	346	879
9/20/2018	247				
9/24/2018		21.2	39.7	358	872
9/25/2018					
9/26/2018					
3/26/2019			34.3		
3/27/2019		17.7			851
3/28/2019	181			258	
4/2/2019					
4/3/2019					

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-38	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-42	YGWC-43	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)
6/2/2016									
6/6/2016								120	58
6/7/2016							28		
7/26/2016									
7/27/2016							74	94	35
7/28/2016									
8/30/2016					1650				
8/31/2016						80			
9/14/2016									
9/16/2016							67		35
9/19/2016								92	
11/2/2016									
11/3/2016							41	104	48
11/4/2016									
11/16/2016					1420	112			
1/11/2017							104	133	95
1/12/2017									
1/13/2017									
2/24/2017						147			
2/27/2017					1640				
3/1/2017								119	79
3/2/2017							77		
3/6/2017									
3/7/2017									
4/26/2017								162	36
5/1/2017									
5/2/2017							142		
5/10/2017					1630	203			
6/27/2017									
6/28/2017								98	45
6/29/2017							53		
7/11/2017					1800	238			
10/3/2017									
10/4/2017							61		45
10/5/2017								104	
10/11/2017		68							
10/12/2017	1360		74	636	1600	287			
11/20/2017	1390	139	179						
11/21/2017				706					
1/10/2018			140						
1/11/2018		153		701					
1/12/2018	1400								
2/19/2018			119	630					
2/20/2018	1300	87							
4/3/2018	1390	85	106	660					
4/4/2018					1520	292			
6/5/2018									
6/6/2018									
6/7/2018								68	
6/11/2018							70		74
6/27/2018				575					
6/28/2018	1310	88	112						

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWC-38	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-42	YGWC-43	YGWA-17S (bg)	YGWA-18I (bg)	YGWA-18S (bg)
8/7/2018	1340	89	103	574					
9/20/2018					1240	434			
9/24/2018	1400	82	107	588					
9/25/2018							86	109	63
9/26/2018									
3/26/2019			90						
3/27/2019	1190	75			1100				
3/28/2019				372		323			
4/2/2019							72		
4/3/2019								89	63

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)
6/2/2016			96	160	66
6/6/2016					
6/7/2016	38	60			
7/26/2016			92	177	78
7/27/2016	74				
7/28/2016		81			
8/30/2016					
8/31/2016					
9/14/2016			102	187	73
9/16/2016					
9/19/2016	45	68			
11/2/2016	53		115	181	
11/3/2016		61			
11/4/2016					75
11/16/2016					
1/11/2017					
1/12/2017				202	86
1/13/2017	46	76	67		
2/24/2017					
2/27/2017					
3/1/2017					
3/2/2017					
3/6/2017	164	167	159		
3/7/2017				257	108
4/26/2017	34	50			
5/1/2017			107	165	
5/2/2017					103
5/10/2017					
6/27/2017				189	73
6/28/2017					
6/29/2017	68	94	79		
7/11/2017					
10/3/2017		149		170	89
10/4/2017	54				
10/5/2017			95		
10/11/2017					
10/12/2017					
11/20/2017					
11/21/2017					
1/10/2018					
1/11/2018					
1/12/2018					
2/19/2018					
2/20/2018					
4/3/2018					
4/4/2018					
6/5/2018		109			
6/6/2018	79			151	
6/7/2018			90		142
6/11/2018					
6/27/2018					
6/28/2018					

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/27/2019 5:19 PM View: Yates R6 - Interwell

Plant Yates Client: Southern Company Data: Yates R6

	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)
8/7/2018					
9/20/2018					
9/24/2018					
9/25/2018	73	122			
9/26/2018			116	144	86
3/26/2019					
3/27/2019					
3/28/2019					
4/2/2019		134			
4/3/2019	57		111	142	83

AP-3-A-B-B` 100% ND

Date: 11/18/2019 2:13 PM

Plant Yates Client: Southern Company Data: Plant Yates

Antimony (mg/L)

YGWC-33S

Arsenic (mg/L)

YGWC-23S, YGWC-24S

Cadmium (mg/L)

YGWC-24S

Cobalt (mg/L)

YGWC-23S, YGWC-24S

Lead (mg/L)

YGWC-49, YGWC-24S

Lithium (mg/L)

YGWC-24S

Selenium (mg/L)

YGWC-24S

Thallium (mg/L)

YGWC-23S, YGWC-24S, YGWC-36

R6 100% ND

Date: 11/18/2019 2:00 PM

Plant Yates Client: Southern Company Data: Plant Yates

Cadmium (mg/L)

YGWC-43

Chromium (mg/L)

YGWC-41

Cobalt (mg/L)

YGWC-38

Molybdenum (mg/L)

YGWC-38, YGWC-41

Selenium (mg/L)

YGWC-43

Interwell Prediction Limit Significant Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/27/2019, 2:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	YGWC-38	0.16	n/a	10/9/2019	13.5	Yes	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	YGWC-41	0.16	n/a	10/9/2019	8.6	Yes	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	YGWC-42	0.16	n/a	10/9/2019	16.6	Yes	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	YGWC-43	0.16	n/a	10/9/2019	2.7	Yes	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	YGWC-23S	0.16	n/a	9/27/2019	0.58	Yes	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	YGWC-33S	0.16	n/a	9/26/2019	9.6	Yes	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-38	37	n/a	10/9/2019	133	Yes	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-42	37	n/a	10/9/2019	92	Yes	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-33S	37	n/a	9/26/2019	117	Yes	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Fluoride (mg/L)	YGWC-33S	0.32	n/a	9/26/2019	0.48	Yes	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
pH (S.U.)	YGWC-38	7.67	4.86	10/9/2019	4.8	Yes	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-33S	7.67	4.86	9/26/2019	3.74	Yes	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-38	71	n/a	10/9/2019	708	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-41	71	n/a	10/9/2019	263	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-42	71	n/a	10/9/2019	725	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-43	71	n/a	10/9/2019	279	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-49	71	n/a	9/26/2019	80	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-33S	71	n/a	9/26/2019	532	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-36	71	n/a	9/26/2019	84.8	Yes	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	YGWC-38	186.5	n/a	10/9/2019	1100	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-41	186.5	n/a	10/9/2019	440	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-42	186.5	n/a	10/9/2019	1170	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-43	186.5	n/a	10/9/2019	501	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-49	186.5	n/a	9/26/2019	192	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-33S	186.5	n/a	9/26/2019	1070	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-36	186.5	n/a	9/26/2019	198	Yes	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2

Interwell Prediction Limit All Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/27/2019, 2:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	**YGWC-38**	**0.16**	**n/a**	**10/9/2019**	**13.5**	**Yes**	**118**	**43.22**	**n/a**	**0.0001405**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-41**	**0.16**	**n/a**	**10/9/2019**	**8.6**	**Yes**	**118**	**43.22**	**n/a**	**0.0001405**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-42**	**0.16**	**n/a**	**10/9/2019**	**16.6**	**Yes**	**118**	**43.22**	**n/a**	**0.0001405**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	**YGWC-43**	**0.16**	**n/a**	**10/9/2019**	**2.7**	**Yes**	**118**	**43.22**	**n/a**	**0.0001405**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	YGWC-49	0.16	n/a	9/26/2019	0.04ND	No	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	**YGWC-23S**	**0.16**	**n/a**	**9/27/2019**	**0.58**	**Yes**	**118**	**43.22**	**n/a**	**0.0001405**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	YGWC-24S	0.16	n/a	9/26/2019	0.0068	No	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Boron (mg/L)	**YGWC-33S**	**0.16**	**n/a**	**9/26/2019**	**9.6**	**Yes**	**118**	**43.22**	**n/a**	**0.0001405**	**NP Inter (normality) 1 of 2**
Boron (mg/L)	YGWC-36	0.16	n/a	9/26/2019	0.13	No	118	43.22	n/a	0.0001405	NP Inter (normality) 1 of 2
Calcium (mg/L)	**YGWC-38**	**37**	**n/a**	**10/9/2019**	**133**	**Yes**	**124**	**0.8065**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	YGWC-41	37	n/a	10/9/2019	27.6	No	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	**YGWC-42**	**37**	**n/a**	**10/9/2019**	**92**	**Yes**	**124**	**0.8065**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	YGWC-43	37	n/a	10/9/2019	18.2	No	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-49	37	n/a	9/26/2019	12.1	No	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-23S	37	n/a	9/27/2019	3.7	No	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	YGWC-24S	37	n/a	9/26/2019	1.7	No	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Calcium (mg/L)	**YGWC-33S**	**37**	**n/a**	**9/26/2019**	**117**	**Yes**	**124**	**0.8065**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Calcium (mg/L)	YGWC-36	37	n/a	9/26/2019	11.7	No	124	0.8065	n/a	0.0001277	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-38	7.8	n/a	10/9/2019	5	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-41	7.8	n/a	10/9/2019	3.3	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-42	7.8	n/a	10/9/2019	4.1	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-43	7.8	n/a	10/9/2019	2.3	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-49	7.8	n/a	9/26/2019	5	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-23S	7.8	n/a	9/27/2019	1.7	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-24S	7.8	n/a	9/26/2019	6.5	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-33S	7.8	n/a	9/26/2019	4.5	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Chloride (mg/L)	YGWC-36	7.8	n/a	9/26/2019	7.1	No	123	0	n/a	0.0001294	NP Inter (normality) 1 of 2
Fluoride (mg/L)	YGWC-38	0.32	n/a	10/9/2019	0.3ND	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-41	0.32	n/a	10/9/2019	0.3ND	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-42	0.32	n/a	10/9/2019	0.3ND	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-43	0.32	n/a	10/9/2019	0.3ND	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-49	0.32	n/a	9/26/2019	0.09	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-23S	0.32	n/a	9/27/2019	0.12	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	YGWC-24S	0.32	n/a	9/26/2019	0.098	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	**YGWC-33S**	**0.32**	**n/a**	**9/26/2019**	**0.48**	**Yes**	**142**	**87.32**	**n/a**	**0.00009717**	**NP Inter (NDs) 1 of 2**
Fluoride (mg/L)	YGWC-36	0.32	n/a	9/26/2019	0.094	No	142	87.32	n/a	0.00009717	NP Inter (NDs) 1 of 2
pH (S.U.)	**YGWC-38**	**7.67**	**4.86**	**10/9/2019**	**4.8**	**Yes**	**142**	**0**	**n/a**	**0.0001943**	**NP Inter (normality) 1 of 2**
pH (S.U.)	YGWC-41	7.67	4.86	10/9/2019	4.86	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-42	7.67	4.86	10/9/2019	5.5	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-43	7.67	4.86	10/9/2019	5.78	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-49	7.67	4.86	9/26/2019	5.6	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-23S	7.67	4.86	9/27/2019	5.77	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	YGWC-24S	7.67	4.86	9/26/2019	5.52	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
pH (S.U.)	**YGWC-33S**	**7.67**	**4.86**	**9/26/2019**	**3.74**	**Yes**	**142**	**0**	**n/a**	**0.0001943**	**NP Inter (normality) 1 of 2**
pH (S.U.)	YGWC-36	7.67	4.86	9/26/2019	5.51	No	142	0	n/a	0.0001943	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**YGWC-38**	**71**	**n/a**	**10/9/2019**	**708**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-41**	**71**	**n/a**	**10/9/2019**	**263**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-42**	**71**	**n/a**	**10/9/2019**	**725**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-43**	**71**	**n/a**	**10/9/2019**	**279**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-49**	**71**	**n/a**	**9/26/2019**	**80**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**

Interwell Prediction Limit All Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/27/2019, 2:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Sulfate (mg/L)	YGWC-23S	71	n/a	9/27/2019	30.3	No	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	YGWC-24S	71	n/a	9/26/2019	0.23	No	124	8.871	n/a	0.0001277	NP Inter (normality) 1 of 2
Sulfate (mg/L)	**YGWC-33S**	**71**	**n/a**	**9/26/2019**	**532**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Sulfate (mg/L)	**YGWC-36**	**71**	**n/a**	**9/26/2019**	**84.8**	**Yes**	**124**	**8.871**	**n/a**	**0.0001277**	**NP Inter (normality) 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-38**	**186.5**	**n/a**	**10/9/2019**	**1100**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-41**	**186.5**	**n/a**	**10/9/2019**	**440**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-42**	**186.5**	**n/a**	**10/9/2019**	**1170**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-43**	**186.5**	**n/a**	**10/9/2019**	**501**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-49**	**186.5**	**n/a**	**9/26/2019**	**192**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	YGWC-23S	186.5	n/a	9/27/2019	96	No	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	YGWC-24S	186.5	n/a	9/26/2019	81	No	124	0	sqrt(x)	0.0008358	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	**YGWC-33S**	**186.5**	**n/a**	**9/26/2019**	**1070**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**
Total Dissolved Solids (mg/L)	**YGWC-36**	**186.5**	**n/a**	**9/26/2019**	**198**	**Yes**	**124**	**0**	**sqrt(x)**	**0.0008358**	**Param Inter 1 of 2**

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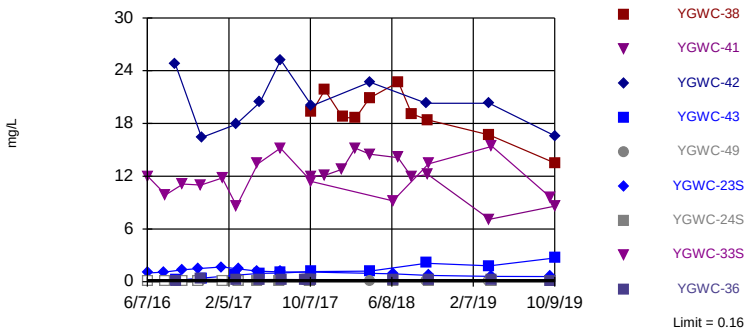
Hollow symbols indicate censored values.

Exceeds Limit: YGWC-38, YGWC-41, YGWC-42, YGWC-43, YGWC-23S, YGWC-

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 118 background values. 43.22% NDs. Annual per-constituent alpha = 0.002526. Individual comparison alpha = 0.0001405 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 11/27/2019 2:39 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

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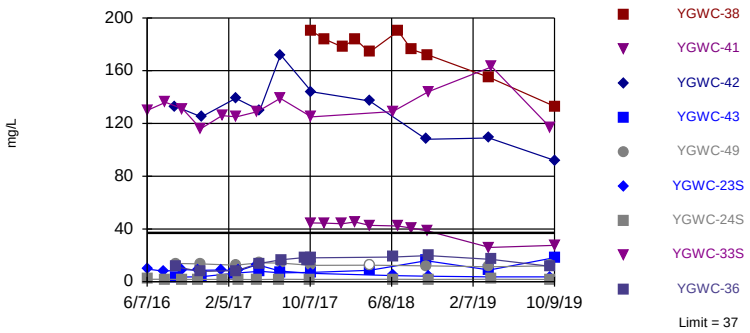
Hollow symbols indicate censored values.

Exceeds Limit: YGWC-38, YGWC-42, YGWC-33S

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 124 background values. 0.8065% NDs. Annual per-constituent alpha = 0.002296. Individual comparison alpha = 0.0001277 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Calcium Analysis Run 11/27/2019 2:39 PM View: Interwell PL

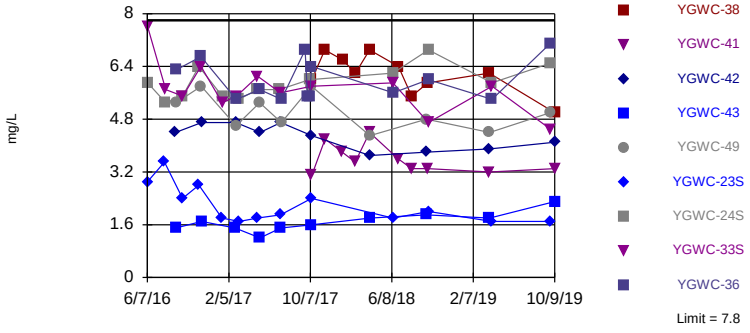
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 123 background values. Annual per-constituent alpha = 0.002327. Individual comparison alpha = 0.0001294 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 11/27/2019 2:39 PM View: Interwell PL

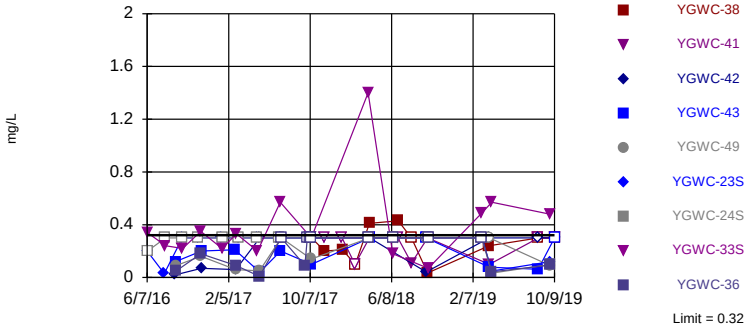
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

Exceeds Limit: YGWC-33S

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 142 background values. 87.32% NDs. Annual per-constituent alpha = 0.001748. Individual comparison alpha = 0.00009717 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 11/27/2019 2:39 PM View: Interwell PL

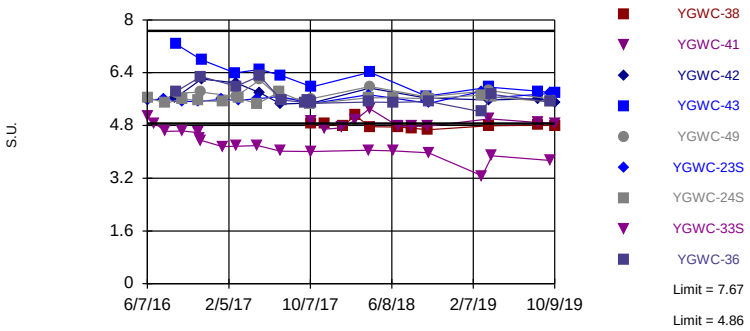
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Exceeds Limits: YGWC-38, YGWC-33S

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 142 background values. Annual per-constituent alpha = 0.003495. Individual comparison alpha = 0.0001943 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 11/27/2019 2:39 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

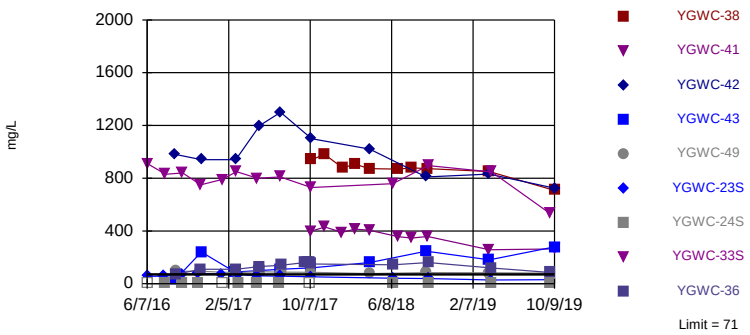
Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Hollow symbols indicate censored values.

Exceeds Limit: YGWC-38, YGWC-41, YGWC-42, YGWC-43, YGWC-49, YGWC-33

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 124 background values. 8.871% NDs. Annual per-constituent alpha = 0.002296. Individual comparison alpha = 0.0001277 (1 of 2). Comparing 9 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 11/27/2019 2:39 PM View: Interwell PL

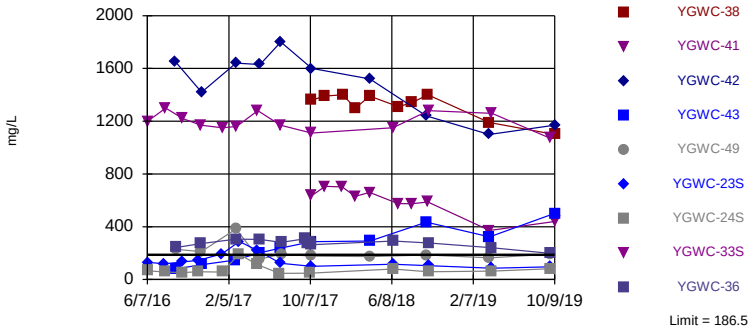
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Exceeds Limit: YGWC-38, YGWC-41, YGWC-42, YGWC-43, YGWC-49, YGWC-33

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=9.69, Std. Dev.=2.057, n=124. Seasonality was not detected with 95% confidence. Normality test: Chi Squared @alpha = 0.01, calculated = 5.516, critical = 14.07. Kappa = 1.929 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0008358. Comparing 9 points to limit.

Constituent: Total Dissolved Solids Analysis Run 11/27/2019 2:39 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5I (bg)	YGWA-4I (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-20S (bg)	YGWC-24S	YGWC-33S	YGWA-5D (bg)
6/2/2016	<0.05	<0.05							<0.05 (o)
6/6/2016			<0.05						
6/7/2016				<0.05	0.99	<0.05			
6/8/2016							<0.05	12	
7/26/2016	<0.1	0.0047 (J)							0.0052 (J)
7/27/2016			<0.1			<0.1			
7/28/2016				<0.1 (*)	1.09				
8/1/2016							<0.1 (*)	9.89	
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016	0.01 (J)	<0.1							0.0071 (J)
9/16/2016									
9/19/2016			<0.1	<0.1		<0.1			
9/20/2016					1.35		<0.1 (*)		
9/21/2016								11.1	
11/2/2016		<0.1				<0.1			<0.1 (o)
11/3/2016			<0.1	<0.1					
11/4/2016	<0.1								
11/8/2016					1.5		<0.04 (*)		
11/14/2016								11	
11/15/2016									
11/16/2016									
1/11/2017			<0.04						
1/12/2017	<0.04								0.0076 (J)
1/13/2017		<0.04		<0.04		<0.04			
1/16/2017					1.67				
1/17/2017							<0.04 (*)	11.8	
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017			<0.04					8.61	
3/2/2017									
3/6/2017		<0.04		<0.04		<0.04			
3/7/2017	<0.04								0.0089 (J)
3/8/2017							<0.04		
3/9/2017					1.44				
4/26/2017			<0.04	<0.04		<0.04			
5/1/2017		<0.04							0.0061 (J)
5/2/2017	<0.04				1.2		0.0099 (J)		
5/3/2017								13.4	
5/9/2017									
5/10/2017									
6/27/2017	<0.04								0.0079 (J)
6/28/2017			<0.04						
6/29/2017		<0.04		<0.04		<0.04			
7/7/2017							0.0076 (J)		
7/10/2017					1.12			15.2	
7/11/2017									
7/13/2017									
9/22/2017									

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5I (bg)	YGWA-4I (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-20S (bg)	YGWC-24S	YGWC-33S	YGWA-5D (bg)
9/29/2017									
10/3/2017	<0.04			<0.04					0.0094 (J)
10/4/2017						<0.04			
10/5/2017		<0.04	<0.04				<0.04		
10/6/2017									
10/11/2017					1.09			11.4	
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									
6/5/2018				0.0092 (J)					
6/6/2018						0.0049 (J)			0.0098 (J)
6/7/2018	<0.04	0.0045 (J)	<0.04						
6/11/2018									
6/12/2018					0.9		0.018 (J)	9.2	
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018			0.0046 (J)	0.0054 (J)		<0.04			
9/26/2018	0.0057 (J)	0.005 (J)					0.0055 (J)	13.4	0.01 (J)
9/27/2018					0.71				
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019				0.011 (J)					
4/3/2019	0.0044 (J)	0.0055 (J)	<0.04			<0.04			0.0076 (J)
4/4/2019					0.6		<0.04	15.4	
9/24/2019	0.0049 (J)			0.018 (J)					0.01 (J)
9/25/2019		<0.04				<0.04			
9/26/2019			0.0062 (J)				0.0068 (J)	9.6	
9/27/2019					0.58				
10/9/2019									

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWA-40 (bg)
6/2/2016									
6/6/2016	<0.05 (o)								
6/7/2016		<0.05 (o)							
6/8/2016									
7/26/2016									
7/27/2016	0.0059 (J)	0.008 (J)							
7/28/2016									
8/1/2016									
8/30/2016			24.7						
8/31/2016				0.169					
9/1/2016					0.0113 (J)				
9/2/2016						0.133			
9/14/2016									
9/16/2016	0.0079 (J)	0.0086 (J)							
9/19/2016									
9/20/2016									
9/21/2016									
11/2/2016									
11/3/2016	0.0082 (J)	0.0077 (J)							
11/4/2016									
11/8/2016									
11/14/2016						0.287			
11/15/2016					0.0074 (J)				
11/16/2016			16.4	0.406					
1/11/2017	0.0096 (J)	0.0092 (J)							
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017									
2/24/2017				0.725					
2/27/2017			17.9		<0.04				
2/28/2017						0.215			
3/1/2017	<0.04 (o)								
3/2/2017		0.0095 (J)							
3/6/2017									
3/7/2017									
3/8/2017									
3/9/2017									
4/26/2017	0.0091 (J)								
5/1/2017									
5/2/2017		<0.04 (o)							
5/3/2017									
5/9/2017					<0.04	0.233			
5/10/2017			20.4	0.955					
6/27/2017									
6/28/2017	0.0079 (J)								
6/29/2017		0.0074 (J)							
7/7/2017									
7/10/2017									
7/11/2017			25.2	0.994					
7/13/2017					0.0093 (J)	0.262			
9/22/2017						0.238			

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-18S (bg)	YGWA-17S (bg)	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWA-40 (bg)
9/29/2017						0.235			
10/3/2017									
10/4/2017	0.009 (J)	0.0077 (J)							
10/5/2017									
10/6/2017						0.256			
10/11/2017					<0.04	0.245	0.0135 (J)		
10/12/2017			20	1.15				19.3	0.0401
11/20/2017							0.0251 (J)	21.8	0.156
11/21/2017									
1/10/2018									0.15
1/11/2018							0.0255 (J)		
1/12/2018								18.7	
2/19/2018									0.146
2/20/2018							<0.04	18.6	
4/3/2018							0.033 (J)	20.9	0.12
4/4/2018			22.7	1.2	0.0041 (J)				
6/5/2018									
6/6/2018									
6/7/2018									
6/11/2018	0.0093 (J)	0.01 (J)							
6/12/2018									
6/13/2018						0.25			
6/27/2018									
6/28/2018							0.053	22.7	0.16
8/7/2018							0.024 (J)	19.1	0.12
9/20/2018			20.3	2.1	0.0042 (J)				
9/24/2018							0.028 (J)	18.4	0.099
9/25/2018	0.007 (J)	0.0096 (J)							
9/26/2018						0.24			
9/27/2018									
3/26/2019									0.096
3/27/2019			20.3				0.017 (J)	16.7	
3/28/2019				1.8	<0.04				
4/2/2019		0.0066 (J)							
4/3/2019	0.0053 (J)								
4/4/2019						0.22			
9/24/2019									
9/25/2019		0.0081 (J)							
9/26/2019	0.0072 (J)				<0.04	0.13			
9/27/2019									
10/9/2019			16.6	2.7			0.017 (J)	13.5	0.079

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-41
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/14/2016	
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	
7/13/2017	
9/22/2017	

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-41
9/29/2017	
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	
10/11/2017	
10/12/2017	12
11/20/2017	
11/21/2017	12.1
1/10/2018	
1/11/2018	12.8
1/12/2018	
2/19/2018	15.2
2/20/2018	
4/3/2018	14.5
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	
6/27/2018	14.1
6/28/2018	
8/7/2018	11.9
9/20/2018	
9/24/2018	12.2
9/25/2018	
9/26/2018	
9/27/2018	
3/26/2019	
3/27/2019	
3/28/2019	7.1
4/2/2019	
4/3/2019	
4/4/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	
10/9/2019	8.6

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-17S (bg)	YGWA-20S (bg)
6/2/2016	8.8	2.4	33						
6/6/2016				1.4	6.2				
6/7/2016						3.7	9.6	2.2	2.3
6/8/2016									
7/26/2016	7.69	2.12	32.3						
7/27/2016				1.19	4.73			2	2.08
7/28/2016						3.15	7.87		
8/1/2016									
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016	8.49	2.18	31						
9/16/2016				1.5				1.97	
9/19/2016					4.76	3.17			1.97
9/20/2016							9.28		
9/21/2016									
11/2/2016	7.83		30.9						2.13
11/3/2016				1.31	5.25	3.4		1.99	
11/4/2016		2.17 (J)							
11/8/2016							8.6		
11/14/2016									
11/15/2016									
11/16/2016									
1/11/2017				1.25	4.74			2.28	
1/12/2017		2.37	35.7						
1/13/2017	8.08					4.98			2.45
1/16/2017							8.85		
1/17/2017									
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017				1.26	5.37				
3/2/2017								2.15	
3/6/2017	8.64					6.28			2.48
3/7/2017		2.34	32.7						
3/8/2017									
3/9/2017							8.4		
4/26/2017				1.05	4.28	6.65			2.3
5/1/2017	13.4		37						
5/2/2017		2.17					12.9	1.95	
5/3/2017									
5/9/2017									
5/10/2017									
6/27/2017		2.13	36.5						
6/28/2017				1.06	4.95				
6/29/2017	8.81					6.04		2.02	2.54
7/7/2017									
7/10/2017							8.09		
7/11/2017									
7/13/2017									
9/22/2017									

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-17S (bg)	YGWA-20S (bg)
9/29/2017									
10/3/2017		2.15	30.9			8.28			
10/4/2017				1.1				2.03	2.25
10/5/2017	9.29				5.28				
10/6/2017									
10/11/2017							6.36		
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									
6/5/2018						9.1			
6/6/2018			26.2						2.3
6/7/2018	8.2	2.3			4.8				
6/11/2018				1.4				2.1	
6/12/2018							4.7		
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018				1	4.6	10.4 (J)		2.1	2.3
9/26/2018	9.5 (J)	2.3	25.8						
9/27/2018							4.1		
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019						8.8		2.5	
4/3/2019	8.4	2.8	24.7 (J)	1.2	5.3				2.9
4/4/2019							3.7		
9/24/2019		2.5	25.8			7.7			
9/25/2019	9.5							2.6	2.4
9/26/2019				1.1	4.9				
9/27/2019							3.7		
10/9/2019									

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWC-41
6/2/2016									
6/6/2016									
6/7/2016									
6/8/2016	130	1.9							
7/26/2016									
7/27/2016									
7/28/2016									
8/1/2016	136	1.83							
8/30/2016			133						
8/31/2016				3.4					
9/1/2016					13.9				
9/2/2016						11.2			
9/14/2016									
9/16/2016									
9/19/2016									
9/20/2016		1.78							
9/21/2016	131								
11/2/2016									
11/3/2016									
11/4/2016									
11/8/2016		1.77							
11/14/2016	116					7.79			
11/15/2016					13.5				
11/16/2016			125	3.79					
1/11/2017									
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017	126	1.7							
2/24/2017				6.42					
2/27/2017			139		12.5				
2/28/2017						8.37			
3/1/2017	125								
3/2/2017									
3/6/2017									
3/7/2017									
3/8/2017		1.77							
3/9/2017									
4/26/2017									
5/1/2017									
5/2/2017		1.57							
5/3/2017	129								
5/9/2017					14.4	13.9			
5/10/2017			130	7.9					
6/27/2017									
6/28/2017									
6/29/2017									
7/7/2017		1.8							
7/10/2017	139								
7/11/2017			172	6.71					
7/13/2017					14.1	16.6			
9/22/2017						18.4			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWC-41
9/29/2017						16.1			
10/3/2017									
10/4/2017									
10/5/2017		1.7							
10/6/2017						16.6			
10/11/2017	125				12.4	18.1	2.74		
10/12/2017			144	7.05				190	44.5
11/20/2017							1.81	184	
11/21/2017									44.4
1/10/2018									
1/11/2018							1.54		43.9
1/12/2018								178	
2/19/2018									45.3
2/20/2018							1.71	184	
4/3/2018							1.4	174	42.7
4/4/2018			137	8.6	<25				
6/5/2018									
6/6/2018									
6/7/2018									
6/11/2018									
6/12/2018	129	1.8							
6/13/2018						18.7 (J)			
6/27/2018									42.2
6/28/2018							1.4	190	
8/7/2018							1.2	176	40.7
9/20/2018			108	15.9 (J)	12 (J)				
9/24/2018							1.1	172	38.5
9/25/2018									
9/26/2018	144	1.7				19.8 (J)			
9/27/2018									
3/26/2019									
3/27/2019			109				1.5	155	
3/28/2019				8.9	11.3 (J)				26
4/2/2019									
4/3/2019									
4/4/2019	163	1.9				16.9 (J)			
9/24/2019									
9/25/2019									
9/26/2019	117	1.7			12.1	11.7			
9/27/2019									
10/9/2019			92	18.2			2.4	133	27.6

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-40 (bg)
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/14/2016	
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	
7/13/2017	
9/22/2017	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-40 (bg)
9/29/2017	
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	
10/11/2017	
10/12/2017	2.9
11/20/2017	10.4
11/21/2017	
1/10/2018	10.2
1/11/2018	
1/12/2018	
2/19/2018	<25
2/20/2018	
4/3/2018	6.3
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	
6/27/2018	
6/28/2018	6.7
8/7/2018	6.3
9/20/2018	
9/24/2018	5.7
9/25/2018	
9/26/2018	
9/27/2018	
3/26/2019	5.6
3/27/2019	
3/28/2019	
4/2/2019	
4/3/2019	
4/4/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	
10/9/2019	4.9

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-20S (bg)
6/2/2016	4.3	7.2	3.7						
6/6/2016				6.8	6.4				
6/7/2016						4.5	2.8	2.9	1.9
6/8/2016									
7/26/2016	4.4	6.6	3.6						
7/27/2016				6.7	6.2	4.5			1.9
7/28/2016							2.6	3.5	
8/1/2016									
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016	3.8	6.6	3.4						
9/16/2016					6.1	4.5			
9/19/2016				7			2.4		1.9
9/20/2016								2.4	
9/21/2016									
11/2/2016		7.6	4.5						2.6
11/3/2016				7.5	7.4	5.4	2.9		
11/4/2016	4.8								
11/8/2016								2.8	
11/14/2016									
11/15/2016									
11/16/2016									
1/11/2017				6.5	6.1	4.7			
1/12/2017	3.8	6.8							
1/13/2017			4.2				2.5		2.3
1/16/2017								1.8	
1/17/2017									
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017				6.9	6				
3/2/2017						4.8			
3/6/2017			3.6				2.1		1.9
3/7/2017	4.5	6.8							
3/8/2017									
3/9/2017								1.7	
4/26/2017				7	6.5		2.1		2
5/1/2017		7.2	4.3						
5/2/2017	4.6					4.6		1.8	
5/3/2017									
5/9/2017									
5/10/2017									
6/27/2017	4.3	7							
6/28/2017				7	6.4				
6/29/2017			4.2			4.5	2.8		2.6
7/7/2017									
7/10/2017								1.9	
7/11/2017									
7/13/2017									
9/22/2017									

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWA-17S (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-20S (bg)
9/29/2017									
10/3/2017	4.2	6.5					2.2		
10/4/2017					6.8	4.7			2.6
10/5/2017			4.7	7					
10/6/2017									
10/11/2017								2.4	
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									
6/5/2018							1.7		
6/6/2018		4.7							2.7
6/7/2018	4.5		4.4	6.8					
6/11/2018					6.8	4.9			
6/12/2018								1.8	
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018				7.9 (o)	7.8	5.6	2.2		3.6
9/26/2018	5.1	4.8	4.8						
9/27/2018								2	
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019						4.8	2.5		
4/3/2019	4.2	4	4.3	6.9	6.3				3.1
4/4/2019								1.7	
9/24/2019	4.5	3.7					3.1		
9/25/2019			4.5			5.7			2.8
9/26/2019				7	7.1				
9/27/2019								1.7	
10/9/2019									

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWA-40 (bg)
6/2/2016									
6/6/2016									
6/7/2016									
6/8/2016	7.6	5.9							
7/26/2016									
7/27/2016									
7/28/2016									
8/1/2016	5.7	5.3							
8/30/2016			4.4						
8/31/2016				1.5					
9/1/2016					5.3				
9/2/2016						6.3			
9/14/2016									
9/16/2016									
9/19/2016									
9/20/2016		5.5							
9/21/2016	5.5								
11/2/2016									
11/3/2016									
11/4/2016									
11/8/2016		6.4							
11/14/2016	6.4					6.7			
11/15/2016					5.8				
11/16/2016			4.7	1.7					
1/11/2017									
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017	5.3	5.5							
2/24/2017				1.5					
2/27/2017			4.7		4.6				
2/28/2017						5.4			
3/1/2017	5.5								
3/2/2017									
3/6/2017									
3/7/2017									
3/8/2017		5.4							
3/9/2017									
4/26/2017									
5/1/2017									
5/2/2017		5.7							
5/3/2017	6.1								
5/9/2017					5.3	5.7			
5/10/2017			4.4	1.2					
6/27/2017									
6/28/2017									
6/29/2017									
7/7/2017		5.7							
7/10/2017	5.6								
7/11/2017			4.7	1.5					
7/13/2017					4.7	5.4			
9/22/2017						6.9			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWA-40 (bg)
9/29/2017						5.5			
10/3/2017									
10/4/2017									
10/5/2017		6							
10/6/2017						5.5			
10/11/2017	5.8				5.8	6.4	2.4		
10/12/2017			4.3	1.6				6	3.8
11/20/2017							1.8	6.9	4.4
11/21/2017									
1/10/2018									4.6
1/11/2018							1.6		
1/12/2018								6.6	
2/19/2018									4.6
2/20/2018							2	6.2	
4/3/2018							3.3	6.9	5.9
4/4/2018			3.7	1.8	4.3				
6/5/2018									
6/6/2018									
6/7/2018									
6/11/2018									
6/12/2018	5.9	6.2							
6/13/2018						5.6			
6/27/2018									
6/28/2018							2.1	6.4	5
8/7/2018							1.2	5.5	4.3
9/20/2018			3.8	1.9	4.8				
9/24/2018							1.3	5.9	4.9
9/25/2018									
9/26/2018	4.7	6.9				6			
9/27/2018									
3/26/2019									4.4
3/27/2019			3.9				1.4	6.2	
3/28/2019				1.8	4.4				
4/2/2019									
4/3/2019									
4/4/2019	5.8	5.9				5.4			
9/24/2019									
9/25/2019									
9/26/2019	4.5	6.5			5	7.1			
9/27/2019									
10/9/2019			4.1	2.3			2.1	5	5.1

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-41
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/14/2016	
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	
7/13/2017	
9/22/2017	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-41
9/29/2017	
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	
10/11/2017	
10/12/2017	3.1
11/20/2017	
11/21/2017	4.2
1/10/2018	
1/11/2018	3.8
1/12/2018	
2/19/2018	3.5
2/20/2018	
4/3/2018	4.4
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	
6/27/2018	3.6
6/28/2018	
8/7/2018	3.3
9/20/2018	
9/24/2018	3.3
9/25/2018	
9/26/2018	
9/27/2018	
3/26/2019	
3/27/2019	
3/28/2019	3.2
4/2/2019	
4/3/2019	
4/4/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	
10/9/2019	3.3

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWC-23S	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-17S (bg)
6/2/2016	0.11 (J)	<0.2	<0.2						
6/6/2016				<0.2	<0.2				
6/7/2016						<0.2	<0.2	<0.2	<0.2
6/8/2016									
7/26/2016	0.05 (J)	<0.3	<0.3						
7/27/2016				<0.3	<0.3		<0.3		<0.3
7/28/2016						0.03 (J)		0.02 (J)	
8/1/2016									
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016	0.04 (J)	<0.3	<0.3						
9/16/2016					<0.3				<0.3
9/19/2016				<0.3			<0.3	0.02 (J)	
9/20/2016						<0.3			
9/21/2016									
11/2/2016	<0.3 (*)	<0.3 (*)					<0.3		
11/3/2016				<0.3	<0.3			<0.3 (*)	<0.3
11/4/2016			<0.3						
11/8/2016						<0.3			
11/14/2016									
11/15/2016									
11/16/2016									
1/11/2017				<0.3	<0.3				<0.3
1/12/2017	0.04 (J)		<0.3						
1/13/2017		<0.3					<0.3	<0.3	
1/16/2017						<0.3			
1/17/2017									
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017				<0.3 (*)	<0.3 (*)				
3/2/2017									<0.3 (*)
3/6/2017		<0.3 (*)					<0.3 (*)	<0.3 (*)	
3/7/2017	<0.3 (*)		<0.3 (*)						
3/8/2017									
3/9/2017						<0.3 (*)			
4/26/2017				<0.3	<0.3		<0.3	0.04 (J)	
5/1/2017	<0.3 (*)	<0.3							
5/2/2017			<0.3			<0.3			<0.3
5/3/2017									
5/9/2017									
5/10/2017									
6/27/2017	<0.3 (*)		<0.3						
6/28/2017				<0.3	<0.3				
6/29/2017		<0.3 (*)					<0.3 (*)	<0.3 (*)	<0.3 (*)
7/7/2017									
7/10/2017						<0.3 (*)			
7/11/2017									
7/13/2017									
9/22/2017									

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5D (bg)	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-18I (bg)	YGWA-18S (bg)	YGWC-23S	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-17S (bg)
9/29/2017									
10/3/2017	<0.3 (*)		<0.3					<0.3 (*)	
10/4/2017					<0.3		<0.3		<0.3
10/5/2017		<0.3		<0.3					
10/6/2017									
10/11/2017						<0.3			
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
3/28/2018				<0.3	<0.3				<0.3
3/29/2018	<0.3	<0.3	<0.3				<0.3	<0.3	
3/30/2018						<0.3			
4/3/2018									
4/4/2018									
6/5/2018								0.13 (J)	
6/6/2018	0.15 (J)						<0.3		
6/7/2018		<0.3	<0.3	<0.3					
6/11/2018					<0.3				<0.3
6/12/2018						<0.3			
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018				<0.3	<0.3		<0.3	0 (J)	<0.3
9/26/2018	<0.3	<0.3	<0.3						
9/27/2018						<0.3			
3/4/2019	0.19 (J)	<0.3	<0.3						
3/5/2019					<0.3		<0.3	0.32	<0.3
3/6/2019				<0.3		<0.3			
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019								0.12 (J)	<0.3
4/3/2019	0.047 (J)	<0.3	<0.3	<0.3	<0.3		<0.3		
4/4/2019						0.049 (J)			
8/21/2019									
8/22/2019									
9/24/2019	0.05 (J)		<0.3					0.15 (J)	
9/25/2019		<0.3					<0.3		<0.3
9/26/2019				<0.3	<0.3				
9/27/2019						0.12 (J)			
10/9/2019									

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWA-40 (bg)
6/2/2016									
6/6/2016									
6/7/2016									
6/8/2016	0.34	<0.2							
7/26/2016									
7/27/2016									
7/28/2016									
8/1/2016	0.24 (J)	<0.3							
8/30/2016			0.02 (J)						
8/31/2016				0.12 (J)					
9/1/2016					0.09 (J)				
9/2/2016						0.05 (J)			
9/14/2016									
9/16/2016									
9/19/2016									
9/20/2016		<0.3							
9/21/2016	0.22 (J)								
11/2/2016									
11/3/2016									
11/4/2016									
11/8/2016		<0.3 (*)							
11/14/2016	0.35					0.18 (J)			
11/15/2016					0.16 (J)				
11/16/2016			0.07 (J)	0.2 (J)					
1/11/2017									
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017	0.22 (J)	<0.3							
2/24/2017				0.21 (J)					
2/27/2017			0.06 (J)		0.06 (J)				
2/28/2017						0.09 (J)			
3/1/2017	0.33								
3/2/2017									
3/6/2017									
3/7/2017									
3/8/2017		<0.3 (*)							
3/9/2017									
4/26/2017									
5/1/2017									
5/2/2017		<0.3							
5/3/2017	0.2 (J)								
5/9/2017					0.05 (J)	0.009 (J)			
5/10/2017			<0.3	0.04 (J)					
6/27/2017									
6/28/2017									
6/29/2017									
7/7/2017		<0.3							
7/10/2017	0.57								
7/11/2017			<0.3	0.2 (J)					
7/13/2017					<0.3	<0.3			
9/22/2017						0.09 (J)			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWA-40 (bg)
9/29/2017						<0.3			
10/3/2017									
10/4/2017									
10/5/2017		<0.3							
10/6/2017						<0.3			
10/11/2017	<0.3 (*)				0.14 (J)	<0.3 (*)	<0.3		
10/12/2017			<0.3	0.1 (J)				<0.3	<0.3
11/20/2017							<0.3	0.2 (J)	<0.3
11/21/2017									
1/10/2018									<0.3
1/11/2018							<0.3		
1/12/2018								0.21 (J)	
2/19/2018									<0.1
2/20/2018							0.23	<0.1	
3/28/2018									
3/29/2018									
3/30/2018	1.4	<0.3				<0.3			
4/3/2018							<0.3	0.41	<0.3
4/4/2018			<0.3	<0.3	<0.3				
6/5/2018									
6/6/2018									
6/7/2018									
6/11/2018									
6/12/2018	0.18 (J)	<0.3							
6/13/2018						<0.3			
6/27/2018									
6/28/2018							<0.3	0.43	<0.3
8/7/2018							0.048 (J)	<0.3	<0.3
9/20/2018			0.041 (J)	<0.3	<0.3				
9/24/2018							<0.3	0.034 (J)	<0.3
9/25/2018									
9/26/2018	0.07 (J)	<0.3				<0.3			
9/27/2018									
3/4/2019									
3/5/2019		<0.3							
3/6/2019	0.49					<0.3			
3/26/2019									<0.3
3/27/2019			<0.3				<0.3	0.24 (J)	
3/28/2019				0.078 (J)	<0.3				
4/2/2019									
4/3/2019									
4/4/2019	0.57	0.033 (J)				0.043 (J)			
8/21/2019				0.062 (J)			<0.3		<0.3
8/22/2019			<0.3					<0.3	
9/24/2019									
9/25/2019									
9/26/2019	0.48	0.098 (J)			0.09 (J)	0.094 (J)			
9/27/2019									
10/9/2019			<0.3	<0.3			<0.3	<0.3	<0.3

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-41
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/14/2016	
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	
7/13/2017	
9/22/2017	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-41
9/29/2017	
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	
10/11/2017	
10/12/2017	<0.3
11/20/2017	
11/21/2017	<0.3
1/10/2018	
1/11/2018	<0.3
1/12/2018	
2/19/2018	<0.1
2/20/2018	
3/28/2018	
3/29/2018	
3/30/2018	
4/3/2018	<0.3
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	
6/27/2018	<0.3
6/28/2018	
8/7/2018	0.11 (J)
9/20/2018	
9/24/2018	<0.3
9/25/2018	
9/26/2018	
9/27/2018	
3/4/2019	
3/5/2019	
3/6/2019	
3/26/2019	
3/27/2019	
3/28/2019	0.1 (J)
4/2/2019	
4/3/2019	
4/4/2019	
8/21/2019	
8/22/2019	<0.3
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	
10/9/2019	<0.3

Prediction Limit

Constituent: pH (S.U.) Analysis Run 11/27/2019 2:40 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-4I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-17S (bg)	YGWC-23S
6/2/2016	7.67	5.75	6.36						
6/6/2016				5.71	6.17				
6/7/2016						5.77	6.1	5.62	5.57
6/8/2016									
6/28/2016									
7/26/2016	7.66	5.72	6.22						
7/27/2016				5.46	6.14	5.79		5.59	
7/28/2016							6.12		5.6
8/1/2016									
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016	7.6	5.74	6.23						
9/16/2016								5.58	
9/19/2016				5.59	6.04	5.73	6.12		
9/20/2016									5.53
9/21/2016									
11/2/2016	7.35		6.08			5.67			
11/3/2016				5.39	5.97		6.07	5.59	
11/4/2016		5.61							
11/8/2016									5.53
11/10/2016									
11/14/2016									
11/15/2016									
11/16/2016									
1/11/2017				5.48	6.05			5.59	
1/12/2017	7.49	5.71							
1/13/2017			6.19			5.79	6.41		
1/16/2017									5.59
1/17/2017									
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017				5.41	5.94				
3/2/2017								5.54	
3/6/2017			6.2			5.63	6.34		
3/7/2017	7.43	5.66							
3/8/2017									
3/9/2017									5.56
4/26/2017				5.4	5.99	5.66	6.32		
5/1/2017	7.22		6.21						
5/2/2017		5.65						5.47	5.61
5/3/2017									
5/9/2017									
5/10/2017									
6/27/2017	7.32	5.7							
6/28/2017				5.36	6				
6/29/2017			6.21			5.85	6.47	5.56	
7/7/2017									
7/10/2017									5.68
7/11/2017									

Prediction Limit

Constituent: pH (S.U.) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-5D (bg)	YGWA-5I (bg)	YGWA-4I (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-17S (bg)	YGWC-23S
7/13/2017									
9/22/2017									
9/29/2017									
10/3/2017	7.48	5.79					6.56		
10/4/2017				5.32		5.83		5.57	
10/5/2017			6.16		6.11				
10/6/2017									
10/11/2017									5.46
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
3/28/2018				5.34	6.1			5.59	
3/29/2018	7.02	5.63	6.09			5.93	6.75		
3/30/2018									5.73
4/3/2018									
4/4/2018									
6/5/2018							6.09		
6/6/2018	7.43					5.86			
6/7/2018		5.63	6.12		5.98				
6/11/2018				5.28				5.58	
6/12/2018									5.63
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018				4.86	5.81	5.84	6.67	5.59	
9/26/2018	7.13	5.63	5.84						
9/27/2018									5.47
3/4/2019	7.46	5.75	6.18						
3/5/2019				5.26		6.07	7.22	5.48	
3/6/2019					5.99				5.84
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019							6.94	5.74	
4/3/2019	7.11	5.63	6.43	5.47	6.29	5.71			
4/4/2019									5.64
8/21/2019									
8/22/2019									
9/24/2019	6.93	5.6					6.87		
9/25/2019			6.2			5.86		5.49	
9/26/2019				5.2	6.04				
9/27/2019									5.77
10/9/2019									

Prediction Limit

Constituent: pH (S.U.) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-24S	YGWC-33S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWC-41
6/2/2016									
6/6/2016									
6/7/2016									
6/8/2016	5.65	5.07							
6/28/2016		4.87							
7/26/2016									
7/27/2016									
7/28/2016									
8/1/2016	5.47	4.62							
8/30/2016			5.64						
8/31/2016				7.27					
9/1/2016					5.78				
9/2/2016						5.84			
9/14/2016									
9/16/2016									
9/19/2016									
9/20/2016	5.61								
9/21/2016		4.63							
11/2/2016									
11/3/2016									
11/4/2016									
11/8/2016	5.55	4.58							
11/10/2016		4.42							
11/14/2016		4.35				6.28			
11/15/2016					5.81				
11/16/2016			6.21	6.79					
1/11/2017									
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017	5.53	4.16							
2/24/2017				6.39					
2/27/2017			6.09		5.68				
2/28/2017						5.99			
3/1/2017		4.17							
3/2/2017									
3/6/2017									
3/7/2017									
3/8/2017	5.62								
3/9/2017									
4/26/2017									
5/1/2017									
5/2/2017	5.46								
5/3/2017		4.19							
5/9/2017					6.18	6.3			
5/10/2017			5.79	6.5					
6/27/2017									
6/28/2017									
6/29/2017									
7/7/2017	5.81								
7/10/2017		4.02							
7/11/2017			5.45	6.32					

Prediction Limit

Constituent: pH (S.U.) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-24S	YGWC-33S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWC-41
7/13/2017					5.6	5.57			
9/22/2017						5.5			
9/29/2017						5.58			
10/3/2017									
10/4/2017									
10/5/2017	5.45								
10/6/2017						5.51			
10/11/2017		4.01			5.61	5.47	6.4		
10/12/2017			5.48	5.97				4.85	4.94
11/20/2017							6.33	4.87	
11/21/2017									4.69
1/10/2018									
1/11/2018							6.29		4.73
1/12/2018								4.78	
2/19/2018									4.96
2/20/2018							7.22	5.1	
3/28/2018									
3/29/2018									
3/30/2018	5.64	4.05				5.51			
4/3/2018							6.87	4.76	5.31
4/4/2018			5.93	6.41	5.98				
6/5/2018									
6/6/2018									
6/7/2018									
6/11/2018									
6/12/2018	5.64	4.03							
6/13/2018						5.5			
6/27/2018									4.78
6/28/2018							6.18	4.75	
8/7/2018							6.08	4.72	4.77
9/20/2018			5.63	5.69	5.67				
9/24/2018							5.81	4.67	4.78
9/25/2018									
9/26/2018	5.61	3.97				5.53			
9/27/2018									
3/4/2019									
3/5/2019	5.72								
3/6/2019		3.27				5.21			
3/26/2019									
3/27/2019			5.57				5.84	4.79	
3/28/2019				5.96	5.86				5
4/2/2019									
4/3/2019									
4/4/2019	5.66	3.88				5.74			
8/21/2019				5.84			5.96		
8/22/2019			5.61					4.81	4.89
9/24/2019									
9/25/2019									
9/26/2019	5.52	3.74			5.6	5.51			
9/27/2019									
10/9/2019			5.5	5.78			5.81	4.8	4.86

Prediction Limit

Constituent: pH (S.U.) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-40 (bg)
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
6/28/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/10/2016	
11/14/2016	
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	

Prediction Limit

Constituent: pH (S.U.) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-40 (bg)
7/13/2017	
9/22/2017	
9/29/2017	
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	
10/11/2017	
10/12/2017	5.43
11/20/2017	5.1
11/21/2017	
1/10/2018	4.97
1/11/2018	
1/12/2018	
2/19/2018	5.6
2/20/2018	
3/28/2018	
3/29/2018	
3/30/2018	
4/3/2018	5.84
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	
6/27/2018	
6/28/2018	5.24
8/7/2018	5.18
9/20/2018	
9/24/2018	5.14
9/25/2018	
9/26/2018	
9/27/2018	
3/4/2019	
3/5/2019	
3/6/2019	
3/26/2019	5.3
3/27/2019	
3/28/2019	
4/2/2019	
4/3/2019	
4/4/2019	
8/21/2019	5.26
8/22/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	
10/9/2019	5.22

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-17S (bg)	YGWA-20S (bg)
6/2/2016	8	1.9	20						
6/6/2016				1.8	1.2				
6/7/2016						5.2	56	4.4	<1
6/8/2016									
7/26/2016	7.7	1.8	20						
7/27/2016				1.9	1.7			4.7	0.08 (J)
7/28/2016						5.1	57		
8/1/2016									
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016	7.5	1.8	19						
9/16/2016				1.7				4.8	
9/19/2016					1.8	4.8			0.08 (J)
9/20/2016							68		
9/21/2016									
11/2/2016	8.2		20						0.1 (J)
11/3/2016				1.9	0.69 (J)	5		5.3	
11/4/2016		2							
11/8/2016							79		
11/14/2016									
11/15/2016									
11/16/2016									
1/11/2017				1.7	<1 (*)			5.2	
1/12/2017		1.9	19						
1/13/2017	8.1					4.3			<1 (*)
1/16/2017							72		
1/17/2017									
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017				<1.6 (*)	1.8				
3/2/2017								5	
3/6/2017	8					4.5			<1
3/7/2017		2.1	20						
3/8/2017									
3/9/2017							69		
4/26/2017				1.9	1.6	4.9			<1
5/1/2017	8.4		20						
5/2/2017		2					60	5	
5/3/2017									
5/9/2017									
5/10/2017									
6/27/2017		2.1	18						
6/28/2017				<1.5 (*)	<1.7 (*)				
6/29/2017	9.2					5.5		5.2	<1 (*)
7/7/2017									
7/10/2017							57		
7/11/2017									
7/13/2017									
9/22/2017									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-4I (bg)	YGWA-5I (bg)	YGWA-5D (bg)	YGWA-18S (bg)	YGWA-18I (bg)	YGWA-21I (bg)	YGWC-23S	YGWA-17S (bg)	YGWA-20S (bg)
9/29/2017									
10/3/2017		2.3	16			5.8			
10/4/2017				1.7				5.3	<1 (*)
10/5/2017	9.6				1.6				
10/6/2017									
10/11/2017							52		
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									
6/5/2018						6.1			
6/6/2018			8.3						0.049 (J)
6/7/2018	8.5	2			0.68 (J)				
6/11/2018				0.95 (J)				5.2	
6/12/2018							41.4		
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018				1.5	1	7		6.1	0.13 (J)
9/26/2018	10.2	2.3	7.9						
9/27/2018							39.6		
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019						3.8		5.1	
4/3/2019	8.5	2.1	7	1.3	0.82 (J)				0.12 (J)
4/4/2019							27.9		
9/24/2019		2.4	5.5			1			
9/25/2019	8.5							5.5	<1
9/26/2019				1	0.64 (J)				
9/27/2019							30.3		
10/9/2019									

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWC-41
6/2/2016									
6/6/2016									
6/7/2016									
6/8/2016	910	<1							
7/26/2016									
7/27/2016									
7/28/2016									
8/1/2016	830	1.1							
8/30/2016			980						
8/31/2016				34					
9/1/2016					95				
9/2/2016						72			
9/14/2016									
9/16/2016									
9/19/2016									
9/20/2016		0.38 (J)							
9/21/2016	840								
11/2/2016									
11/3/2016									
11/4/2016									
11/8/2016		0.39 (J)							
11/14/2016	750					110			
11/15/2016					94				
11/16/2016			940	240					
1/11/2017									
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017	790	<1 (*)							
2/24/2017				89					
2/27/2017			940		84				
2/28/2017						110			
3/1/2017	850								
3/2/2017									
3/6/2017									
3/7/2017									
3/8/2017		0.29 (J)							
3/9/2017									
4/26/2017									
5/1/2017									
5/2/2017		0.29 (J)							
5/3/2017	800								
5/9/2017					91	130			
5/10/2017			1200	100					
6/27/2017									
6/28/2017									
6/29/2017									
7/7/2017		0.37 (J)							
7/10/2017	810								
7/11/2017			1300	110					
7/13/2017					88	140			
9/22/2017						160			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-33S	YGWC-24S	YGWC-42	YGWC-43	YGWC-49	YGWC-36	YGWA-39 (bg)	YGWC-38	YGWC-41
9/29/2017						160			
10/3/2017									
10/4/2017									
10/5/2017		<1 (*)							
10/6/2017						160			
10/11/2017	730				86	150	20		
10/12/2017			1100	120				940	400
11/20/2017							24	980	
11/21/2017									430
1/10/2018									
1/11/2018							23		390
1/12/2018								880	
2/19/2018									414
2/20/2018							20.6	905	
4/3/2018							24.5	872	406
4/4/2018			1020	160	76.5				
6/5/2018									
6/6/2018									
6/7/2018									
6/11/2018									
6/12/2018	759	0.35 (J)							
6/13/2018						144			
6/27/2018									357
6/28/2018							22	869	
8/7/2018							20.7	879	346
9/20/2018			810	247	84.1				
9/24/2018							21.2	872	358
9/25/2018									
9/26/2018	895	0.28 (J)				160			
9/27/2018									
3/26/2019									
3/27/2019			831				17.7	851	
3/28/2019				181	82.8				258
4/2/2019									
4/3/2019									
4/4/2019	847	0.29 (J)				119			
9/24/2019									
9/25/2019									
9/26/2019	532	0.23 (J)			80	84.8			
9/27/2019									
10/9/2019			725	279			15	708	263

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-40 (bg)
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/14/2016	
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	
7/13/2017	
9/22/2017	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-40 (bg)
9/29/2017	
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	
10/11/2017	
10/12/2017	17
11/20/2017	71
11/21/2017	
1/10/2018	66
1/11/2018	
1/12/2018	
2/19/2018	57.2
2/20/2018	
4/3/2018	49.4
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	
6/27/2018	
6/28/2018	43.8
8/7/2018	40.5
9/20/2018	
9/24/2018	39.7
9/25/2018	
9/26/2018	
9/27/2018	
3/26/2019	34.3
3/27/2019	
3/28/2019	
4/2/2019	
4/3/2019	
4/4/2019	
9/24/2019	
9/25/2019	
9/26/2019	
9/27/2019	
10/9/2019	27.9

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-38	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-42	YGWC-43	YGWC-49	YGWA-17S (bg)	YGWA-18I (bg)
6/2/2016									
6/6/2016									120
6/7/2016								28	
6/8/2016									
7/26/2016									
7/27/2016								74	94
7/28/2016									
8/1/2016									
8/30/2016					1650				
8/31/2016						80			
9/1/2016							228		
9/2/2016									
9/14/2016									
9/16/2016								67	
9/19/2016									92
9/20/2016									
9/21/2016									
11/2/2016									
11/3/2016								41	104
11/4/2016									
11/8/2016									
11/14/2016									
11/15/2016							211		
11/16/2016					1420	112			
1/11/2017								104	133
1/12/2017									
1/13/2017									
1/16/2017									
1/17/2017									
2/24/2017						147			
2/27/2017					1640		382		
2/28/2017									
3/1/2017									119
3/2/2017								77	
3/6/2017									
3/7/2017									
3/8/2017									
3/9/2017									
4/26/2017									162
5/1/2017									
5/2/2017								142	
5/3/2017									
5/9/2017							154		
5/10/2017					1630	203			
6/27/2017									
6/28/2017									98
6/29/2017								53	
7/7/2017									
7/10/2017									
7/11/2017					1800	238			
7/13/2017							192		
9/22/2017									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-38	YGWA-39 (bg)	YGWA-40 (bg)	YGWC-41	YGWC-42	YGWC-43	YGWC-49	YGWA-17S (bg)	YGWA-18I (bg)
9/29/2017									
10/3/2017									
10/4/2017								61	
10/5/2017									104
10/6/2017									
10/11/2017		68					177		
10/12/2017	1360		74	636	1600	287			
11/20/2017	1390	139	179						
11/21/2017				706					
1/10/2018			140						
1/11/2018		153		701					
1/12/2018	1400								
2/19/2018			119	630					
2/20/2018	1300	87							
4/3/2018	1390	85	106	660					
4/4/2018					1520	292	174		
6/5/2018									
6/6/2018									
6/7/2018									68
6/11/2018								70	
6/12/2018									
6/13/2018									
6/27/2018				575					
6/28/2018	1310	88	112						
8/7/2018	1340	89	103	574					
9/20/2018					1240	434	186		
9/24/2018	1400	82	107	588					
9/25/2018								86	109
9/26/2018									
9/27/2018									
3/26/2019			90						
3/27/2019	1190	75			1100				
3/28/2019				372		323	164		
4/2/2019								72	
4/3/2019									89
4/4/2019									
9/24/2019									
9/25/2019								81	
9/26/2019							192		126
9/27/2019									
10/9/2019	1100	119	98	440	1170	501			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWC-23S	YGWC-24S	YGWC-33S
6/2/2016				96	160	66			
6/6/2016	58								
6/7/2016		38	60				130		
6/8/2016								66	1200
7/26/2016				92	177	78			
7/27/2016	35	74							
7/28/2016			81				119		
8/1/2016								56	1300
8/30/2016									
8/31/2016									
9/1/2016									
9/2/2016									
9/14/2016				102	187	73			
9/16/2016	35								
9/19/2016		45	68						
9/20/2016							132	53	
9/21/2016									1220
11/2/2016		53		115	181				
11/3/2016	48		61						
11/4/2016						75			
11/8/2016							146	58	
11/14/2016									1170
11/15/2016									
11/16/2016									
1/11/2017	95								
1/12/2017					202	86			
1/13/2017		46	76	67					
1/16/2017							194		
1/17/2017								56	1150
2/24/2017									
2/27/2017									
2/28/2017									
3/1/2017	79								1160
3/2/2017									
3/6/2017		164	167	159					
3/7/2017					257	108			
3/8/2017								192	
3/9/2017							288		
4/26/2017	36	34	50						
5/1/2017				107	165				
5/2/2017						103	221	113	
5/3/2017									1280
5/9/2017									
5/10/2017									
6/27/2017					189	73			
6/28/2017	45								
6/29/2017		68	94	79					
7/7/2017								46	
7/10/2017							123		1170
7/11/2017									
7/13/2017									
9/22/2017									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWA-18S (bg)	YGWA-20S (bg)	YGWA-21I (bg)	YGWA-4I (bg)	YGWA-5D (bg)	YGWA-5I (bg)	YGWC-23S	YGWC-24S	YGWC-33S
9/29/2017									
10/3/2017			149		170	89			
10/4/2017	45	54							
10/5/2017				95				48	
10/6/2017									
10/11/2017							100		1110
10/12/2017									
11/20/2017									
11/21/2017									
1/10/2018									
1/11/2018									
1/12/2018									
2/19/2018									
2/20/2018									
4/3/2018									
4/4/2018									
6/5/2018			109						
6/6/2018		79			151				
6/7/2018				90		142			
6/11/2018	74								
6/12/2018							115	79	1150
6/13/2018									
6/27/2018									
6/28/2018									
8/7/2018									
9/20/2018									
9/24/2018									
9/25/2018	63	73	122						
9/26/2018				116	144	86		59	1280
9/27/2018							105		
3/26/2019									
3/27/2019									
3/28/2019									
4/2/2019			134						
4/3/2019	63	57		111	142	83			
4/4/2019							85	63	1260
9/24/2019			157		129	79			
9/25/2019		75		117					
9/26/2019	72							81	1070
9/27/2019							96		
10/9/2019									

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-36
6/2/2016	
6/6/2016	
6/7/2016	
6/8/2016	
7/26/2016	
7/27/2016	
7/28/2016	
8/1/2016	
8/30/2016	
8/31/2016	
9/1/2016	
9/2/2016	243
9/14/2016	
9/16/2016	
9/19/2016	
9/20/2016	
9/21/2016	
11/2/2016	
11/3/2016	
11/4/2016	
11/8/2016	
11/14/2016	272
11/15/2016	
11/16/2016	
1/11/2017	
1/12/2017	
1/13/2017	
1/16/2017	
1/17/2017	
2/24/2017	
2/27/2017	
2/28/2017	306
3/1/2017	
3/2/2017	
3/6/2017	
3/7/2017	
3/8/2017	
3/9/2017	
4/26/2017	
5/1/2017	
5/2/2017	
5/3/2017	
5/9/2017	303
5/10/2017	
6/27/2017	
6/28/2017	
6/29/2017	
7/7/2017	
7/10/2017	
7/11/2017	
7/13/2017	282
9/22/2017	309

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/27/2019 2:41 PM View: Interwell PL

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-36
9/29/2017	273
10/3/2017	
10/4/2017	
10/5/2017	
10/6/2017	287
10/11/2017	264
10/12/2017	
11/20/2017	
11/21/2017	
1/10/2018	
1/11/2018	
1/12/2018	
2/19/2018	
2/20/2018	
4/3/2018	
4/4/2018	
6/5/2018	
6/6/2018	
6/7/2018	
6/11/2018	
6/12/2018	
6/13/2018	292
6/27/2018	
6/28/2018	
8/7/2018	
9/20/2018	
9/24/2018	
9/25/2018	
9/26/2018	277
9/27/2018	
3/26/2019	
3/27/2019	
3/28/2019	
4/2/2019	
4/3/2019	
4/4/2019	240
9/24/2019	
9/25/2019	
9/26/2019	198
9/27/2019	
10/9/2019	

AP-3-A-B-B` Confidence Interval Significant Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/18/2019, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Beryllium (mg/L)	**YGWC-33S**	**0.01914**	**0.014**	**0.004**	**Yes**	**13**	**0**	**x^(1/3)**	**0.01**	**Param.**
Cobalt (mg/L)	**YGWC-33S**	**0.02654**	**0.01432**	**0.013**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**

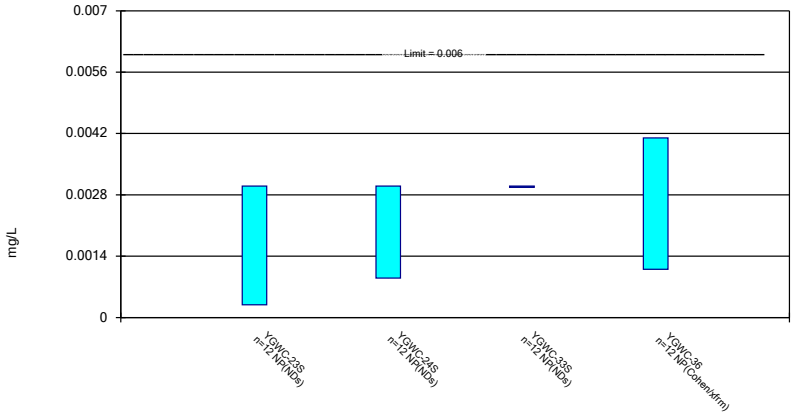
AP-3-A-B-B` Confidence Interval All Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/18/2019, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	YGWC-23S	0.003	0.00029	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	YGWC-24S	0.003	0.0009	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	YGWC-33S	0.003	0.003	0.006	No	12	100	No	0.01	NP (NDs)
Antimony (mg/L)	YGWC-36	0.0041	0.0011	0.006	No	12	58.33	No	0.01	NP (Cohens/xfrm)
Arsenic (mg/L)	YGWC-23S	0.005	0.005	0.01	No	14	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-24S	0.005	0.005	0.01	No	14	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-33S	0.00492	0.002851	0.01	No	14	7.143	No	0.01	Param.
Arsenic (mg/L)	YGWC-36	0.005	0.00066	0.01	No	14	78.57	No	0.01	NP (NDs)
Barium (mg/L)	YGWC-23S	0.04746	0.02684	2	No	14	0	No	0.01	Param.
Barium (mg/L)	YGWC-24S	0.01981	0.01857	2	No	14	0	x^2	0.01	Param.
Barium (mg/L)	YGWC-33S	0.01785	0.01096	2	No	14	7.143	sqrt(x)	0.01	Param.
Barium (mg/L)	YGWC-36	0.04686	0.03401	2	No	14	0	x^2	0.01	Param.
Beryllium (mg/L)	YGWC-23S	0.0015	0.000077	0.004	No	14	35.71	No	0.01	NP (normality)
Beryllium (mg/L)	YGWC-24S	0.0015	0.0001	0.004	No	14	21.43	No	0.01	NP (normality)
Beryllium (mg/L)	**YGWC-33S**	**0.01914**	**0.014**	**0.004**	**Yes**	**13**	**0**	**x^(1/3)**	**0.01**	**Param.**
Beryllium (mg/L)	YGWC-36	0.0003199	0.0002508	0.004	No	13	0	x^4	0.01	Param.
Cadmium (mg/L)	YGWC-23S	0.0025	0.00007	0.005	No	14	92.86	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-24S	0.0025	0.0025	0.005	No	14	100	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-33S	0.003111	0.00222	0.005	No	14	0	x^2	0.01	Param.
Cadmium (mg/L)	YGWC-36	0.0002	0.00017	0.005	No	10	0	No	0.011	NP (normality)
Cobalt (mg/L)	YGWC-23S	0.0025	0.0025	0.013	No	14	100	No	0.01	NP (NDs)
Cobalt (mg/L)	YGWC-24S	0.0025	0.0025	0.013	No	14	100	No	0.01	NP (NDs)
Cobalt (mg/L)	**YGWC-33S**	**0.02654**	**0.01432**	**0.013**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	YGWC-36	0.0025	0.0006	0.013	No	14	85.71	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	YGWC-23S	0.878	0.2966	6.92	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-24S	0.8401	0.4468	6.92	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-33S	1.413	0.6635	6.92	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-36	1.1	0.5335	6.92	No	14	0	No	0.01	Param.
Fluoride (mg/L)	YGWC-23S	0.3	0.11	4	No	16	75	No	0.01	NP (normality)
Fluoride (mg/L)	YGWC-24S	0.3	0.098	4	No	16	81.25	No	0.01	NP (NDs)
Fluoride (mg/L)	YGWC-33S	0.5468	0.2056	4	No	15	6.667	sqrt(x)	0.01	Param.
Fluoride (mg/L)	YGWC-36	0.3	0.05	4	No	16	56.25	No	0.01	NP (normality)
Lead (mg/L)	YGWC-23S	0.005	0.00044	0.015	No	12	83.33	No	0.01	NP (NDs)
Lead (mg/L)	YGWC-24S	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	YGWC-33S	0.005	0.0006	0.015	No	12	25	No	0.01	NP (Cohens/xfrm)
Lead (mg/L)	YGWC-36	0.005	0.0002	0.015	No	12	16.67	No	0.01	NP (normality)
Lithium (mg/L)	YGWC-23S	0.0025	0.0017	0.04	No	13	0	No	0.01	NP (normality)
Lithium (mg/L)	YGWC-24S	0.01	0.01	0.04	No	14	100	No	0.01	NP (NDs)
Lithium (mg/L)	YGWC-33S	0.02896	0.01839	0.04	No	14	0	No	0.01	Param.
Lithium (mg/L)	YGWC-36	0.006434	0.004842	0.04	No	14	0	x^2	0.01	Param.
Selenium (mg/L)	YGWC-23S	0.0422	0.02547	0.05	No	14	0	No	0.01	Param.
Selenium (mg/L)	YGWC-24S	0.01	0.01	0.05	No	14	100	No	0.01	NP (NDs)
Selenium (mg/L)	YGWC-33S	0.0148	0.008574	0.05	No	14	7.143	No	0.01	Param.
Selenium (mg/L)	YGWC-36	0.01	0.0018	0.05	No	14	21.43	No	0.01	NP (normality)
Thallium (mg/L)	YGWC-23S	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	YGWC-24S	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	YGWC-33S	0.001	0.00014	0.002	No	12	33.33	No	0.01	NP (Cohens/xfrm)
Thallium (mg/L)	YGWC-36	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

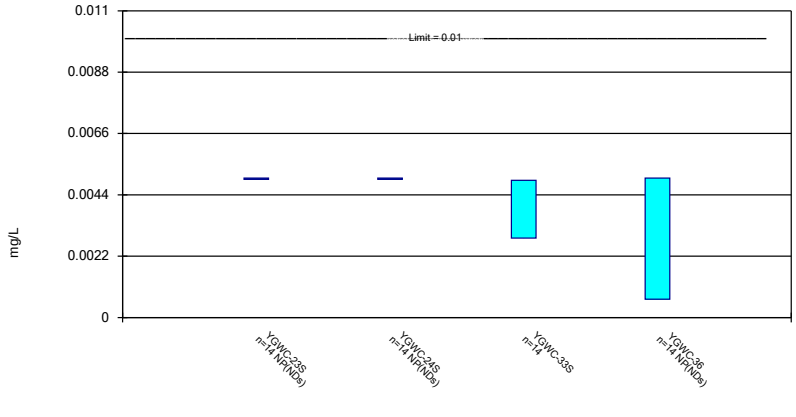
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

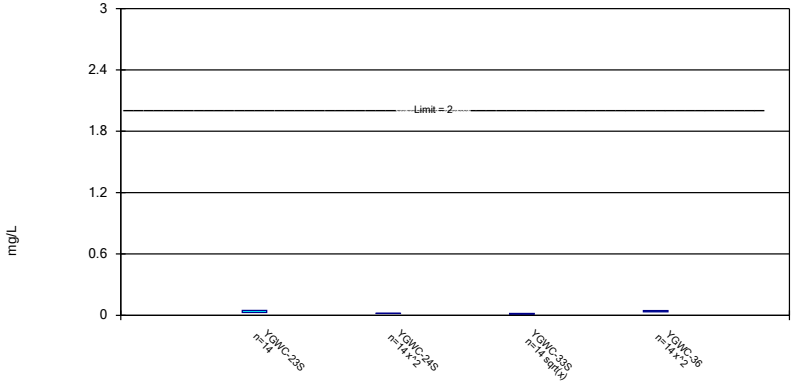
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric Confidence Interval

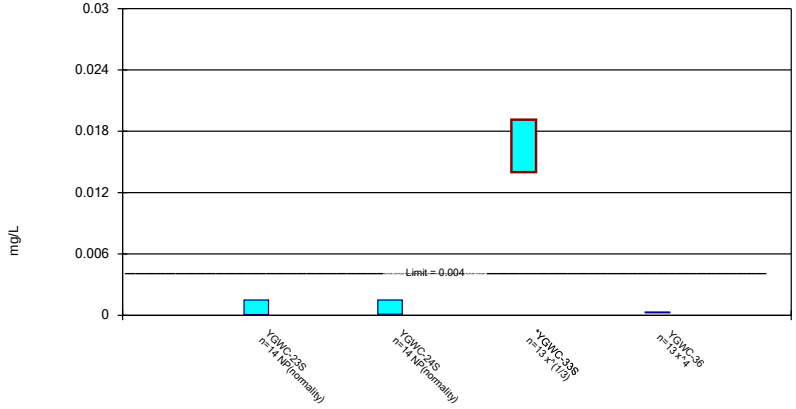
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

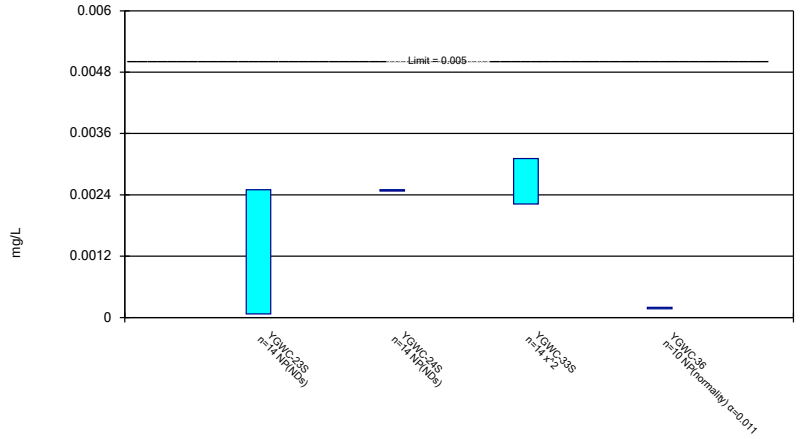
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

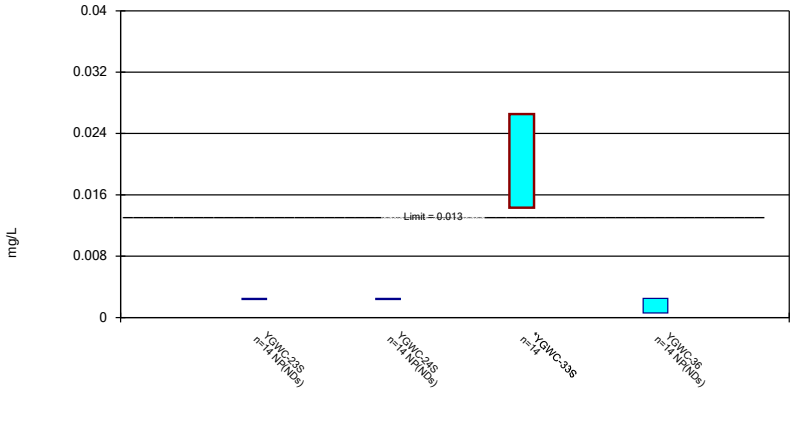
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

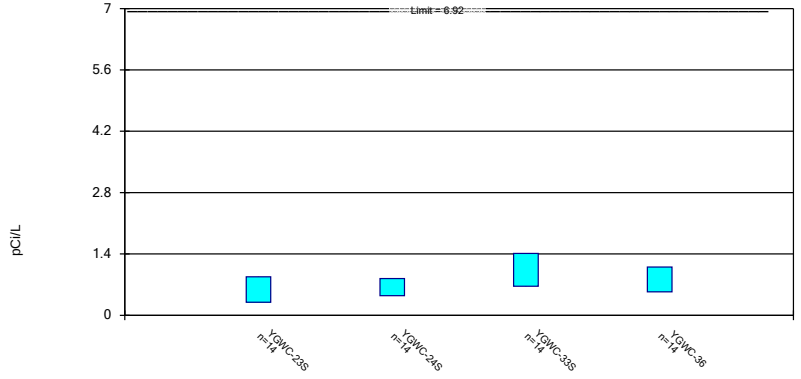
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric Confidence Interval

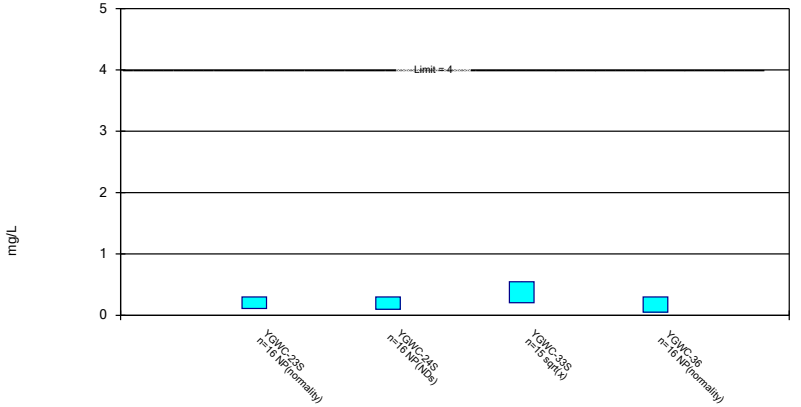
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confiden
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

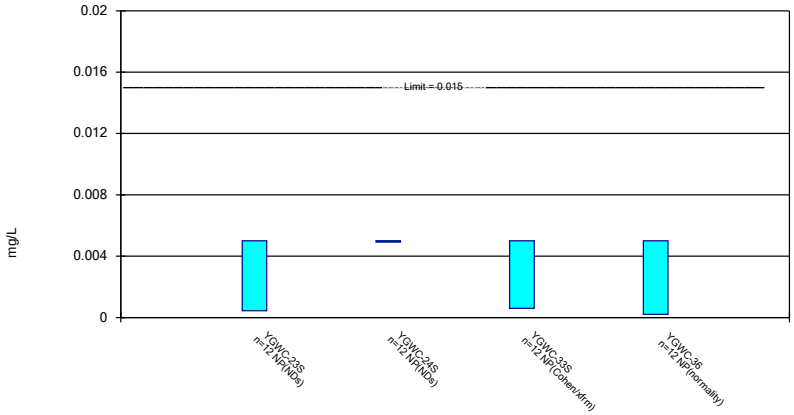
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Non-Parametric Confidence Interval

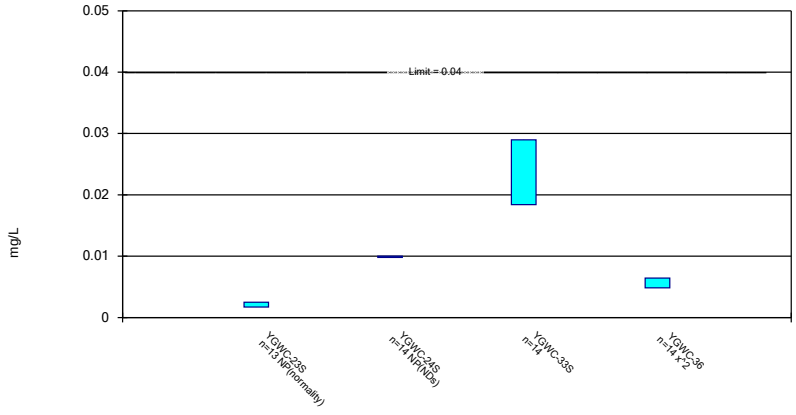
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

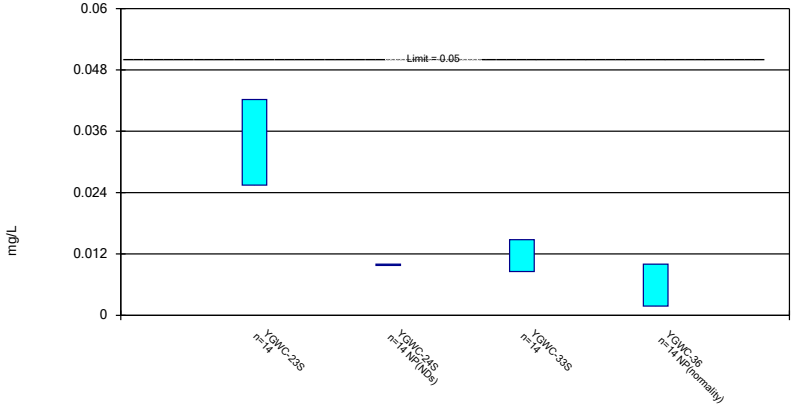
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

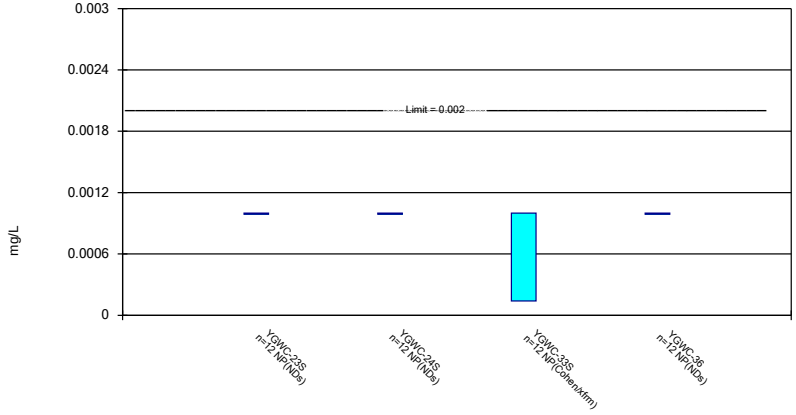
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/18/2019 7:00 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 11/18/2019 7:01 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.003			
6/8/2016		<0.003	<0.003	
7/28/2016	<0.003			
8/1/2016		<0.003	<0.003 (*)	
9/2/2016				<0.003
9/20/2016	<0.003	0.0009 (J)		
9/21/2016			<0.003	
11/8/2016	<0.003	<0.003		
11/14/2016			<0.003	0.0014 (J)
1/16/2017	<0.003			
1/17/2017		<0.003	<0.003	
2/28/2017				0.0004 (J)
3/1/2017			<0.003	
3/8/2017		<0.003		
3/9/2017	<0.003			
5/2/2017	<0.003	<0.003		
5/3/2017			<0.003	
5/9/2017				<0.003
7/7/2017		<0.003		
7/10/2017	<0.003		<0.003	
7/13/2017				<0.003
9/22/2017				<0.003
9/29/2017				<0.003
10/6/2017				<0.003
3/30/2018	<0.003	<0.003	<0.003	<0.003
3/5/2019		<0.003		
3/6/2019	<0.003		<0.003	0.0011 (J)
4/4/2019	<0.003	<0.003	<0.003	0.0041
9/26/2019		<0.003	<0.003	0.0065
9/27/2019	0.00029 (J)			
Mean	0.002774	0.002825	0.003	0.002875
Std. Dev.	0.0007823	0.0006062	0	0.001543
Upper Lim.	0.003	0.003	0.003	0.0041
Lower Lim.	0.00029	0.0009	0.003	0.0011

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.005			
6/8/2016		<0.005	0.0033	
7/28/2016	<0.005			
8/1/2016		<0.005	0.007	
9/2/2016				<0.005
9/20/2016	<0.005	<0.005		
9/21/2016			0.0054	
11/8/2016	<0.005	<0.005		
11/14/2016			<0.005	<0.005
1/16/2017	<0.005			
1/17/2017		<0.005	0.0027 (J)	
2/28/2017				0.0006 (J)
3/1/2017			0.0041 (J)	
3/8/2017		<0.005		
3/9/2017	<0.005			
5/2/2017	<0.005 (*)	<0.005 (*)		
5/3/2017			0.0037 (J)	
5/9/2017				0.0006 (J)
7/7/2017		<0.005		
7/10/2017	<0.005		0.0044 (J)	
7/13/2017				<0.005
9/22/2017				<0.005
9/29/2017				<0.005
10/6/2017				<0.005
3/30/2018	<0.005	<0.005	0.0049 (J)	<0.005
6/12/2018	<0.005	<0.005	0.002 (J)	
6/13/2018				0.00066 (J)
9/26/2018		<0.005	0.0048 (J)	<0.005
9/27/2018	<0.005			
3/5/2019		<0.005		
3/6/2019	<0.005		0.0022 (J)	<0.005
4/4/2019	<0.005	<0.005	0.0024 (J)	<0.005
9/26/2019		<0.005	0.0025 (J)	<0.005
9/27/2019	<0.005			
Mean	0.005	0.005	0.003886	0.004061
Std. Dev.	0	0	0.00146	0.001865
Upper Lim.	0.005	0.005	0.00492	0.005
Lower Lim.	0.005	0.005	0.002851	0.00066

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.045			
6/8/2016		0.02	0.029	
7/28/2016	0.0511			
8/1/2016		0.02	0.02	
9/2/2016				0.0409
9/20/2016	0.0561	0.0203		
9/21/2016			0.0183	
11/8/2016	0.054	0.0191		
11/14/2016			0.0149	0.0182
1/16/2017	0.0528			
1/17/2017		0.0192	<0.0139 (*)	
2/28/2017				0.023
3/1/2017			0.0142	
3/8/2017		0.0189		
3/9/2017	0.0469			
5/2/2017	0.0427	0.019		
5/3/2017			0.0151	
5/9/2017				0.0349
7/7/2017		0.019		
7/10/2017	0.0395		0.0137	
7/13/2017				0.0484
9/22/2017				0.0491
9/29/2017				0.0452
10/6/2017				0.0508
3/30/2018	0.03	0.02	0.012	0.043
6/12/2018	0.024	0.018	0.012	
6/13/2018				0.046
9/26/2018		0.019	0.012	0.048
9/27/2018	0.022			
3/5/2019		0.019		
3/6/2019	0.019		0.012	0.041
4/4/2019	0.019	0.02	0.014	0.042
9/26/2019		0.017	0.01	0.025
9/27/2019	0.018			
Mean	0.03715	0.01918	0.01458	0.03968
Std. Dev.	0.01456	0.0008903	0.005252	0.01047
Upper Lim.	0.04746	0.01981	0.01785	0.04686
Lower Lim.	0.02684	0.01857	0.01096	0.03401

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.003			
6/8/2016		<0.003	0.012	
7/28/2016	<0.003			
8/1/2016		0.0001 (J)	0.0146	
9/2/2016				0.0003 (J)
9/20/2016	0.0001 (J)	0.0001 (J)		
9/21/2016			0.0149	
11/8/2016	<0.003 (*)	<0.003 (*)		
11/14/2016			0.0152	9E-05 (J)
1/16/2017	0.0001 (J)			
1/17/2017		0.0001 (J)	0.0142	
2/28/2017				0.0001 (J)
3/1/2017			0.015	
3/8/2017		0.0001 (J)		
3/9/2017	0.0001 (J)			
5/2/2017	9E-05 (J)	0.0001 (J)		
5/3/2017			0.0154	
5/9/2017				0.0002 (J)
7/7/2017		0.0001 (J)		
7/10/2017	<0.003		0.0143	
7/13/2017				0.0003 (J)
9/22/2017				0.0003 (J)
9/29/2017				0.0003 (J)
10/6/2017				0.0003 (J)
3/30/2018	<0.003	<0.003	0.018	<0.003 (o)
6/12/2018	8.1E-05 (J)	0.00012 (J)	0.016	
6/13/2018				0.00035 (J)
9/26/2018		0.00014 (J)	0.024 (o)	0.00032 (J)
9/27/2018	9E-05 (J)			
3/5/2019		0.00016 (J)		
3/6/2019	6.6E-05 (J)		0.023	0.00029 (J)
4/4/2019	7.2E-05 (J)	0.00015 (J)	0.025	0.00033 (J)
9/26/2019		0.00014 (J)	0.019	0.00029 (J)
9/27/2019	7.7E-05 (J)			
Mean	0.0005911	0.000415	0.01666	0.0002669
Std. Dev.	0.0007031	0.0005884	0.003704	8.36E-05
Upper Lim.	0.0015	0.0015	0.01914	0.0003199
Lower Lim.	7.7E-05	0.0001	0.014	0.0002508

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.0025			
6/8/2016		<0.0025	0.00098 (J)	
7/28/2016	<0.0025			
8/1/2016		<0.0025	0.0014	
9/2/2016				<0.001 (o)
9/20/2016	<0.0025	<0.0025		
9/21/2016			0.0017	
11/8/2016	7E-05 (J)	<0.0025		
11/14/2016			0.0027	9E-05 (J,o)
1/16/2017	<0.0025			
1/17/2017		<0.0025	0.0033	
2/28/2017				0.0001 (J,o)
3/1/2017			0.0031	
3/8/2017		<0.0025		
3/9/2017	<0.0025			
5/2/2017	<0.0025	<0.0025		
5/3/2017			0.0031	
5/9/2017				0.0002 (J)
7/7/2017		<0.0025		
7/10/2017	<0.0025		0.0029	
7/13/2017				0.0002 (J)
9/22/2017				0.0002 (J)
9/29/2017				0.0002 (J)
10/6/2017				0.0002 (J)
3/30/2018	<0.0025	<0.0025	0.0028	<0.001 (o)
6/12/2018	<0.0025	<0.0025	0.0029	
6/13/2018				0.00019 (J)
9/26/2018		<0.0025	0.0028	0.00018 (J)
9/27/2018	<0.0025			
3/5/2019		<0.0025		
3/6/2019	<0.0025		0.003	0.00015 (J)
4/4/2019	<0.0025	<0.0025	0.0035	0.00019 (J)
9/26/2019		<0.0025	0.0023 (J)	0.00017 (J)
9/27/2019	<0.0025			
Mean	0.002326	0.0025	0.002606	0.000188
Std. Dev.	0.0006494	0	0.0007439	1.687E-05
Upper Lim.	0.0025	0.0025	0.003111	0.0002
Lower Lim.	7E-05	0.0025	0.00222	0.00017

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.0025			
6/8/2016		<0.0025	0.037	
7/28/2016	<0.0025			
8/1/2016		<0.0025	0.0297	
9/2/2016				0.0006 (J)
9/20/2016	<0.0025	<0.0025		
9/21/2016			0.0237	
11/8/2016	<0.0025	<0.0025		
11/14/2016			0.0144	<0.0025
1/16/2017	<0.0025			
1/17/2017		<0.0025	0.0095 (J)	
2/28/2017				<0.0025
3/1/2017			0.0125	
3/8/2017		<0.0025		
3/9/2017	<0.0025			
5/2/2017	<0.0025	<0.0025		
5/3/2017			0.0151	
5/9/2017				<0.0025
7/7/2017		<0.0025		
7/10/2017	<0.0025		0.0121	
7/13/2017				<0.0025
9/22/2017				<0.0025
9/29/2017				<0.0025
10/6/2017				<0.0025
3/30/2018	<0.0025	<0.0025	0.013	<0.0025
6/12/2018	<0.0025	<0.0025	0.014	
6/13/2018				<0.0025
9/26/2018		<0.0025	0.023	<0.0025
9/27/2018	<0.0025			
3/5/2019		<0.0025		
3/6/2019	<0.0025		0.028	<0.0025
4/4/2019	<0.0025	<0.0025	0.031	<0.0025
9/26/2019		<0.0025	0.023	0.00048 (J)
9/27/2019	<0.0025			
Mean	0.0025	0.0025	0.02043	0.00222
Std. Dev.	0	0	0.008622	0.0007121
Upper Lim.	0.0025	0.0025	0.02654	0.0025
Lower Lim.	0.0025	0.0025	0.01432	0.0006

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.303 (U)			
6/8/2016		1.06	0.384 (U)	
7/28/2016	0.386 (U)			
8/1/2016		0.467 (U)	1.55	
9/2/2016				0.873 (U)
9/20/2016	1.47	0.853 (U)		
9/21/2016			2.36	
9/22/2016				0.667 (U)
9/29/2016				1.63
10/6/2016				0.641 (U)
11/8/2016	0.22 (U)	0.433 (U)		
11/14/2016			0.851 (U)	0.0451 (U)
1/16/2017	0.147 (U)			
1/17/2017		0.0759 (U)	1.41 (U)	
2/28/2017				1.34 (U)
3/1/2017			1.13	
3/8/2017		0.479 (U)		
3/9/2017	0.0892 (U)			
5/2/2017	0.149 (U)	0.506 (U)		
5/3/2017			0.584 (U)	
5/9/2017				0.309 (U)
7/7/2017		0.713 (U)		
7/10/2017	0.815 (U)		0.46 (U)	
7/13/2017				0.618 (U)
3/30/2018	0.659 (U)	0.409 (U)	0.607 (U)	0.721 (U)
6/12/2018	1.03 (U)	0.728 (U)	0.633 (U)	
6/13/2018				1.04 (U)
9/26/2018		0.981	1.38	0.604 (U)
9/27/2018	1.06 (U)			
3/5/2019		0.837 (U)		
3/6/2019	0.736 (U)		0.97 (U)	0.919 (U)
4/4/2019	0.474 (U)		1.14	1.05 (U)
4/9/2019		0.502 (U)		
9/26/2019		0.964 (U)	1.08 (U)	0.979 (U)
9/27/2019	0.684 (U)			
Mean	0.5873	0.6434	1.039	0.8169
Std. Dev.	0.4105	0.2776	0.5294	0.4
Upper Lim.	0.878	0.8401	1.413	1.1
Lower Lim.	0.2966	0.4468	0.6635	0.5335

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.3			
6/8/2016		<0.3	0.34	
7/28/2016	0.03 (J)			
8/1/2016		<0.3	0.24 (J)	
9/2/2016				0.05 (J)
9/20/2016	<0.3	<0.3		
9/21/2016			0.22 (J)	
11/8/2016	<0.3	<0.3 (*)		
11/14/2016			0.35	0.18 (J)
1/16/2017	<0.3			
1/17/2017		<0.3	0.22 (J)	
2/28/2017				0.09 (J)
3/1/2017			0.33	
3/8/2017		<0.3 (*)		
3/9/2017	<0.3 (*)			
5/2/2017	<0.3	<0.3		
5/3/2017			0.2 (J)	
5/9/2017				0.009 (J)
7/7/2017		<0.3		
7/10/2017	<0.3 (*)		0.57	
7/13/2017				<0.3
9/22/2017				0.09 (J)
9/29/2017				<0.3
10/5/2017		<0.3		
10/6/2017				<0.3
10/11/2017	<0.3		<0.3 (*)	<0.3 (*)
3/30/2018	<0.3	<0.3	1.4	<0.3
6/12/2018	<0.3	<0.3	0.18 (J)	
6/13/2018				<0.3
9/26/2018		<0.3	0.07 (J)	<0.3
9/27/2018	<0.3			
3/5/2019		<0.3		
3/6/2019	<0.3		0.49	<0.3
4/4/2019	0.049 (J)	0.033 (J)	0.57	0.043 (J)
9/26/2019		0.098 (J)	0.48	0.094 (J)
9/27/2019	0.12 (J)			
10/10/2019	0.11 (J)	0.03 (J)		<0.3
Mean	0.2443	0.2538	0.3973	0.2035
Std. Dev.	0.1016	0.1003	0.3141	0.1181
Upper Lim.	0.3	0.3	0.5468	0.3
Lower Lim.	0.11	0.098	0.2056	0.05

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.00044 (J)			
6/8/2016		<0.005	<0.005 (*)	
7/28/2016	<0.005			
8/1/2016		<0.005	0.0005 (J)	
9/2/2016				0.0017 (J)
9/20/2016	<0.005	<0.005		
9/21/2016			0.0006 (J)	
11/8/2016	<0.005	<0.005		
11/14/2016			0.0012 (J)	0.0002 (J)
1/16/2017	<0.005			
1/17/2017		<0.005	0.002 (J)	
2/28/2017				0.0003 (J)
3/1/2017			0.002 (J)	
3/8/2017		<0.005		
3/9/2017	<0.005			
5/2/2017	<0.005	<0.005		
5/3/2017			<0.005 (*)	
5/9/2017				0.0004 (J)
7/7/2017		<0.005		
7/10/2017	<0.005		0.0018 (J)	
7/13/2017				0.0004 (J)
9/22/2017				0.0003 (J)
9/29/2017				0.0002 (J)
10/6/2017				0.0002 (J)
3/30/2018	<0.005	<0.005	<0.005	<0.005
3/5/2019		<0.005		
3/6/2019	<0.005		0.0012 (J)	<0.005
4/4/2019	<0.005	<0.005	0.0014 (J)	0.00037 (J)
9/26/2019		<0.005	0.00087 (J)	0.00023 (J)
9/27/2019	0.00013 (J)			
Mean	0.004214	0.005	0.002214	0.001192
Std. Dev.	0.001837	0	0.001748	0.001826
Upper Lim.	0.005	0.005	0.005	0.005
Lower Lim.	0.00044	0.005	0.0006	0.0002

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.005 (o)			
6/8/2016		<0.01	0.0099	
7/28/2016	0.0019 (J)			
8/1/2016		<0.01	0.0142 (J)	
9/2/2016				0.0029 (J)
9/20/2016	0.0021 (J)	<0.01		
9/21/2016			0.0145 (J)	
11/8/2016	0.0024 (J)	<0.01		
11/14/2016			0.0253 (J)	0.0044 (J)
1/16/2017	0.0022 (J)			
1/17/2017		<0.01	0.0256 (J)	
2/28/2017				0.0038 (J)
3/1/2017			0.0219 (J)	
3/8/2017		<0.01		
3/9/2017	0.0025 (J)			
5/2/2017	0.0019 (J)	<0.01		
5/3/2017			0.0217 (J)	
5/9/2017				0.0057 (J)
7/7/2017		<0.01		
7/10/2017	0.0018 (J)		0.0214 (J)	
7/13/2017				0.007 (J)
9/22/2017				0.0067 (J)
9/29/2017				0.0064 (J)
10/6/2017				0.0065 (J)
3/30/2018	0.0039 (J)	<0.01	0.024 (J)	0.0061 (J)
6/12/2018	0.0017 (J)	<0.01	0.023 (J)	
6/13/2018				0.0065 (J)
9/26/2018		<0.01	0.034 (J)	0.0063 (J)
9/27/2018	0.0017 (J)			
3/5/2019		<0.01		
3/6/2019	0.0025 (J)		0.033 (J)	0.0057 (J)
4/4/2019	0.0018 (J)	<0.01	0.035 (J)	0.0058 (J)
9/26/2019		<0.01	0.028	0.0041 (J)
9/27/2019	0.0017 (J)			
Mean	0.002162	0.01	0.02368	0.005564
Std. Dev.	0.0006021	0	0.007459	0.001254
Upper Lim.	0.0025	0.01	0.02896	0.006434
Lower Lim.	0.0017	0.01	0.01839	0.004842

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.037			
6/8/2016		<0.01	0.0011 (J)	
7/28/2016	0.0385			
8/1/2016		<0.01	0.0192	
9/2/2016				0.0012 (J)
9/20/2016	0.0464	<0.01		
9/21/2016			0.0147	
11/8/2016	0.0521	<0.01		
11/14/2016			<0.01	<0.01
1/16/2017	0.0469			
1/17/2017		<0.01	0.0122	
2/28/2017				0.0017 (J)
3/1/2017			0.0151	
3/8/2017		<0.01		
3/9/2017	0.0437			
5/2/2017	0.0395	<0.01		
5/3/2017			0.012	
5/9/2017				0.0018 (J)
7/7/2017		<0.01		
7/10/2017	0.0386		0.0106	
7/13/2017				0.0031 (J)
9/22/2017				0.0024 (J)
9/29/2017				0.002 (J)
10/6/2017				<0.01
3/30/2018	0.028	<0.01	0.011	<0.01
6/12/2018	0.026	<0.01	0.0057 (J)	
6/13/2018				0.0024 (J)
9/26/2018		<0.01	0.016	0.0037 (J)
9/27/2018	0.023			
3/5/2019		<0.01		
3/6/2019	0.019		0.013	0.0033 (J)
4/4/2019	0.017	<0.01	0.012	0.0029 (J)
9/26/2019		<0.01	0.011	0.0019 (J)
9/27/2019	0.018			
Mean	0.03384	0.01	0.01169	0.004029
Std. Dev.	0.01181	0	0.004393	0.003306
Upper Lim.	0.0422	0.01	0.0148	0.01
Lower Lim.	0.02547	0.01	0.008574	0.0018

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 11/18/2019 7:02 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.001			
6/8/2016		<0.001	<0.001	
7/28/2016	<0.001			
8/1/2016		<0.001	6E-05 (J)	
9/2/2016				<0.001
9/20/2016	<0.001	<0.001		
9/21/2016			<0.001	
11/8/2016	<0.001	<0.001		
11/14/2016			<0.001	<0.001
1/16/2017	<0.001			
1/17/2017		<0.001	0.0004 (J)	
2/28/2017				<0.001
3/1/2017			0.0003 (J)	
3/8/2017		<0.001		
3/9/2017	<0.001			
5/2/2017	<0.001	<0.001		
5/3/2017			0.0002 (J)	
5/9/2017				<0.001
7/7/2017		<0.001		
7/10/2017	<0.001		0.0002 (J)	
7/13/2017				<0.001
9/22/2017				<0.001
9/29/2017				<0.001
10/6/2017				<0.001
3/30/2018	<0.001	<0.001	<0.001	<0.001
3/5/2019		<0.001		
3/6/2019	<0.001		0.00016 (J)	<0.001
4/4/2019	<0.001	<0.001	0.00018 (J)	<0.001
9/26/2019		<0.001	0.00014 (J)	<0.001
9/27/2019	<0.001			
Mean	0.001	0.001	0.00047	0.001
Std. Dev.	0	0	0.0004	0
Upper Lim.	0.001	0.001	0.001	0.001
Lower Lim.	0.001	0.001	0.00014	0.001

AP-3-A-B-B` Confidence Interval Significant Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/18/2019, 7:05 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Beryllium (mg/L)	**YGWC-33S**	**0.01914**	**0.014**	**0.004**	**Yes**	**13**	**0**	**x^(1/3)**	**0.01**	**Param.**
Cobalt (mg/L)	**YGWC-33S**	**0.02654**	**0.01432**	**0.013**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**

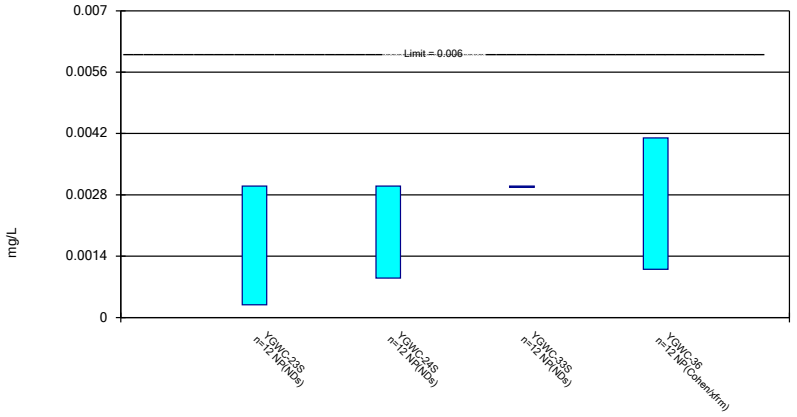
AP-3-A-B-B` Confidence Interval All Results

Plant Yates Client: Southern Company Data: Plant Yates Printed 11/18/2019, 7:05 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	YGWC-23S	0.003	0.00029	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	YGWC-24S	0.003	0.0009	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	YGWC-33S	0.003	0.003	0.006	No	12	100	No	0.01	NP (NDs)
Antimony (mg/L)	YGWC-36	0.0041	0.0011	0.006	No	12	58.33	No	0.01	NP (Cohens/xfrm)
Arsenic (mg/L)	YGWC-23S	0.005	0.005	0.01	No	14	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-24S	0.005	0.005	0.01	No	14	100	No	0.01	NP (NDs)
Arsenic (mg/L)	YGWC-33S	0.00492	0.002851	0.01	No	14	7.143	No	0.01	Param.
Arsenic (mg/L)	YGWC-36	0.005	0.00066	0.01	No	14	78.57	No	0.01	NP (NDs)
Barium (mg/L)	YGWC-23S	0.04746	0.02684	2	No	14	0	No	0.01	Param.
Barium (mg/L)	YGWC-24S	0.01981	0.01857	2	No	14	0	x^2	0.01	Param.
Barium (mg/L)	YGWC-33S	0.01785	0.01096	2	No	14	7.143	sqrt(x)	0.01	Param.
Barium (mg/L)	YGWC-36	0.04686	0.03401	2	No	14	0	x^2	0.01	Param.
Beryllium (mg/L)	YGWC-23S	0.0015	0.000077	0.004	No	14	35.71	No	0.01	NP (normality)
Beryllium (mg/L)	YGWC-24S	0.0015	0.0001	0.004	No	14	21.43	No	0.01	NP (normality)
Beryllium (mg/L)	**YGWC-33S**	**0.01914**	**0.014**	**0.004**	**Yes**	**13**	**0**	**x^(1/3)**	**0.01**	**Param.**
Beryllium (mg/L)	YGWC-36	0.0003199	0.0002508	0.004	No	13	0	x^4	0.01	Param.
Cadmium (mg/L)	YGWC-23S	0.0025	0.00007	0.005	No	14	92.86	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-24S	0.0025	0.0025	0.005	No	14	100	No	0.01	NP (NDs)
Cadmium (mg/L)	YGWC-33S	0.003111	0.00222	0.005	No	14	0	x^2	0.01	Param.
Cadmium (mg/L)	YGWC-36	0.0002	0.00017	0.005	No	10	0	No	0.011	NP (normality)
Cobalt (mg/L)	YGWC-23S	0.0025	0.0025	0.013	No	14	100	No	0.01	NP (NDs)
Cobalt (mg/L)	YGWC-24S	0.0025	0.0025	0.013	No	14	100	No	0.01	NP (NDs)
Cobalt (mg/L)	**YGWC-33S**	**0.02654**	**0.01432**	**0.013**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	YGWC-36	0.0025	0.0006	0.013	No	14	85.71	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	YGWC-23S	0.878	0.2966	6.92	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-24S	0.8401	0.4468	6.92	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-33S	1.413	0.6635	6.92	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	YGWC-36	1.1	0.5335	6.92	No	14	0	No	0.01	Param.
Fluoride (mg/L)	YGWC-23S	0.3	0.11	4	No	16	75	No	0.01	NP (normality)
Fluoride (mg/L)	YGWC-24S	0.3	0.098	4	No	16	81.25	No	0.01	NP (NDs)
Fluoride (mg/L)	YGWC-33S	0.5468	0.2056	4	No	15	6.667	sqrt(x)	0.01	Param.
Fluoride (mg/L)	YGWC-36	0.3	0.05	4	No	16	56.25	No	0.01	NP (normality)
Lead (mg/L)	YGWC-23S	0.005	0.00044	0.015	No	12	83.33	No	0.01	NP (NDs)
Lead (mg/L)	YGWC-24S	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	YGWC-33S	0.005	0.0006	0.015	No	12	25	No	0.01	NP (Cohens/xfrm)
Lead (mg/L)	YGWC-36	0.005	0.0002	0.015	No	12	16.67	No	0.01	NP (normality)
Lithium (mg/L)	YGWC-23S	0.0025	0.0017	0.025	No	13	0	No	0.01	NP (normality)
Lithium (mg/L)	YGWC-24S	0.01	0.01	0.025	No	14	100	No	0.01	NP (NDs)
Lithium (mg/L)	YGWC-33S	0.02896	0.01839	0.025	No	14	0	No	0.01	Param.
Lithium (mg/L)	YGWC-36	0.006434	0.004842	0.025	No	14	0	x^2	0.01	Param.
Selenium (mg/L)	YGWC-23S	0.0422	0.02547	0.05	No	14	0	No	0.01	Param.
Selenium (mg/L)	YGWC-24S	0.01	0.01	0.05	No	14	100	No	0.01	NP (NDs)
Selenium (mg/L)	YGWC-33S	0.0148	0.008574	0.05	No	14	7.143	No	0.01	Param.
Selenium (mg/L)	YGWC-36	0.01	0.0018	0.05	No	14	21.43	No	0.01	NP (normality)
Thallium (mg/L)	YGWC-23S	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	YGWC-24S	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	YGWC-33S	0.001	0.00014	0.002	No	12	33.33	No	0.01	NP (Cohens/xfrm)
Thallium (mg/L)	YGWC-36	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

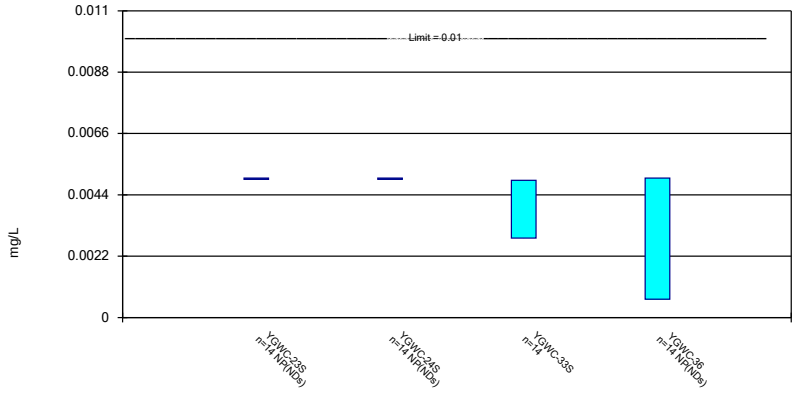
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

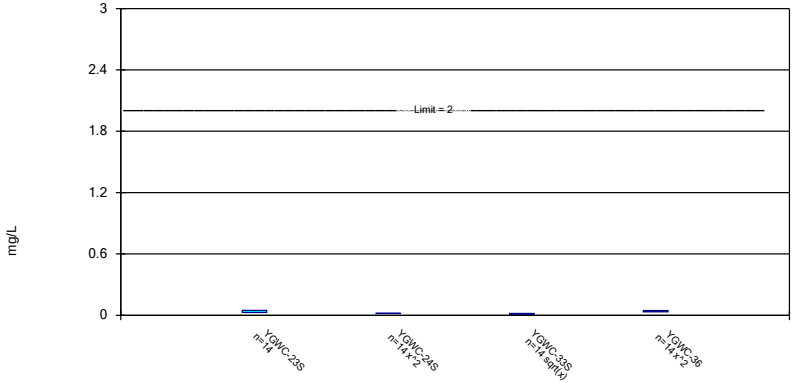
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric Confidence Interval

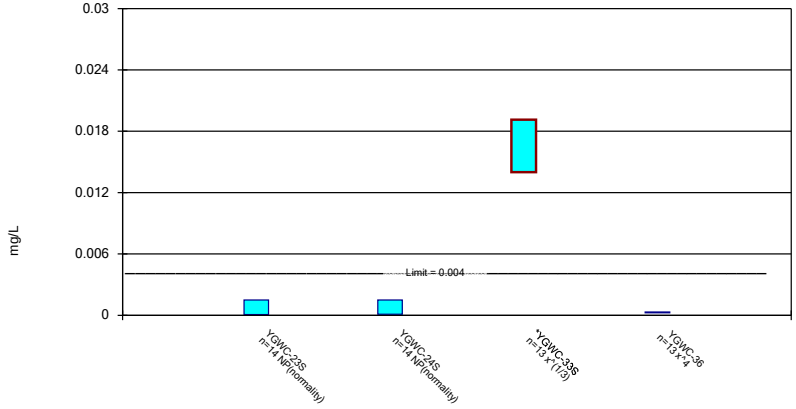
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

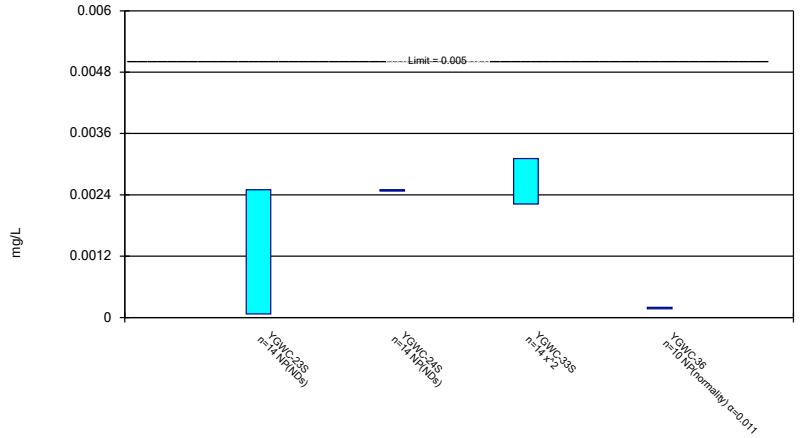
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

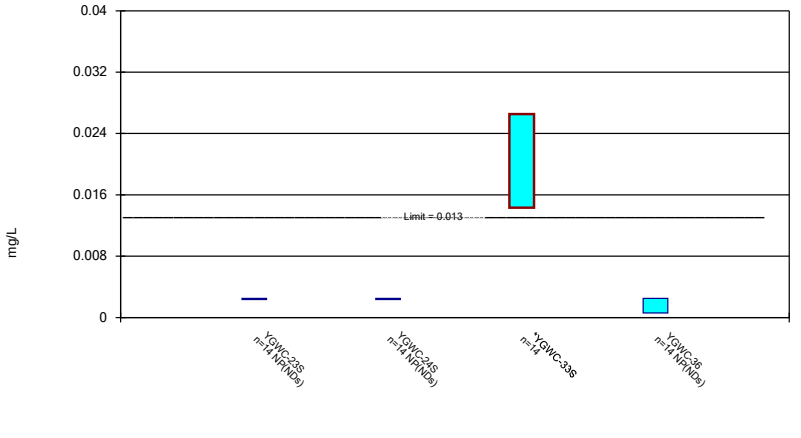
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

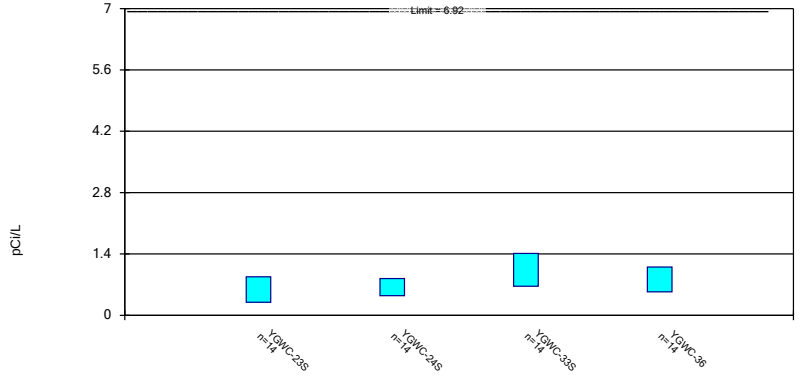
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric Confidence Interval

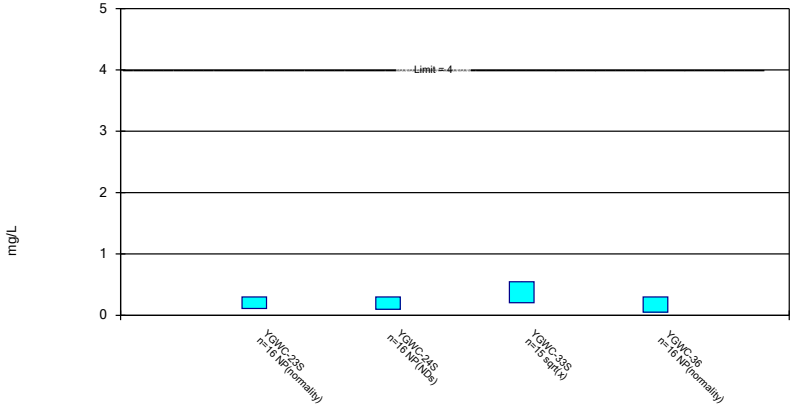
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confiden
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

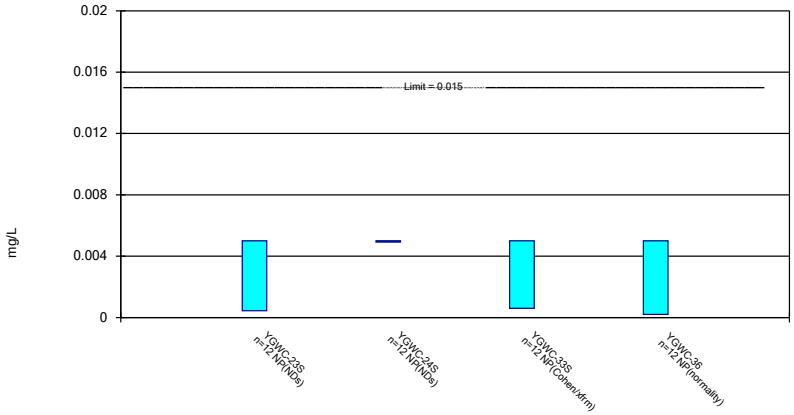
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/18/2019 7:03 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Non-Parametric Confidence Interval

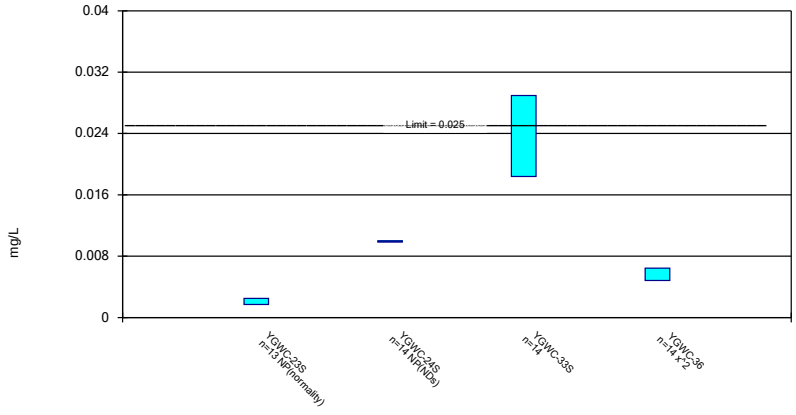
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/18/2019 7:04 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

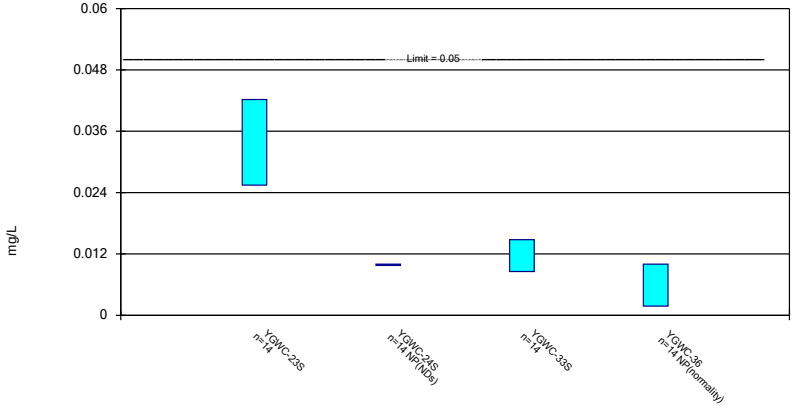
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/18/2019 7:04 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Parametric and Non-Parametric (NP) Confidence Interval

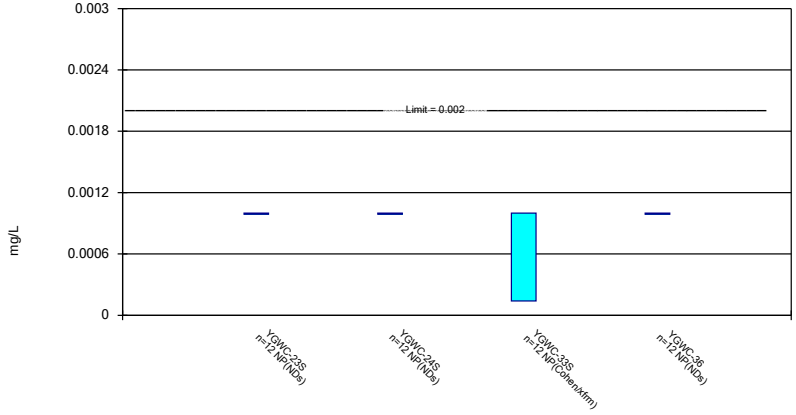
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/18/2019 7:04 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 11/18/2019 7:04 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.003			
6/8/2016		<0.003	<0.003	
7/28/2016	<0.003			
8/1/2016		<0.003	<0.003 (*)	
9/2/2016				<0.003
9/20/2016	<0.003	0.0009 (J)		
9/21/2016			<0.003	
11/8/2016	<0.003	<0.003		
11/14/2016			<0.003	0.0014 (J)
1/16/2017	<0.003			
1/17/2017		<0.003	<0.003	
2/28/2017				0.0004 (J)
3/1/2017			<0.003	
3/8/2017		<0.003		
3/9/2017	<0.003			
5/2/2017	<0.003	<0.003		
5/3/2017			<0.003	
5/9/2017				<0.003
7/7/2017		<0.003		
7/10/2017	<0.003		<0.003	
7/13/2017				<0.003
9/22/2017				<0.003
9/29/2017				<0.003
10/6/2017				<0.003
3/30/2018	<0.003	<0.003	<0.003	<0.003
3/5/2019		<0.003		
3/6/2019	<0.003		<0.003	0.0011 (J)
4/4/2019	<0.003	<0.003	<0.003	0.0041
9/26/2019		<0.003	<0.003	0.0065
9/27/2019	0.00029 (J)			
Mean	0.002774	0.002825	0.003	0.002875
Std. Dev.	0.0007823	0.0006062	0	0.001543
Upper Lim.	0.003	0.003	0.003	0.0041
Lower Lim.	0.00029	0.0009	0.003	0.0011

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.005			
6/8/2016		<0.005	0.0033	
7/28/2016	<0.005			
8/1/2016		<0.005	0.007	
9/2/2016				<0.005
9/20/2016	<0.005	<0.005		
9/21/2016			0.0054	
11/8/2016	<0.005	<0.005		
11/14/2016			<0.005	<0.005
1/16/2017	<0.005			
1/17/2017		<0.005	0.0027 (J)	
2/28/2017				0.0006 (J)
3/1/2017			0.0041 (J)	
3/8/2017		<0.005		
3/9/2017	<0.005			
5/2/2017	<0.005 (*)	<0.005 (*)		
5/3/2017			0.0037 (J)	
5/9/2017				0.0006 (J)
7/7/2017		<0.005		
7/10/2017	<0.005		0.0044 (J)	
7/13/2017				<0.005
9/22/2017				<0.005
9/29/2017				<0.005
10/6/2017				<0.005
3/30/2018	<0.005	<0.005	0.0049 (J)	<0.005
6/12/2018	<0.005	<0.005	0.002 (J)	
6/13/2018				0.00066 (J)
9/26/2018		<0.005	0.0048 (J)	<0.005
9/27/2018	<0.005			
3/5/2019		<0.005		
3/6/2019	<0.005		0.0022 (J)	<0.005
4/4/2019	<0.005	<0.005	0.0024 (J)	<0.005
9/26/2019		<0.005	0.0025 (J)	<0.005
9/27/2019	<0.005			
Mean	0.005	0.005	0.003886	0.004061
Std. Dev.	0	0	0.00146	0.001865
Upper Lim.	0.005	0.005	0.00492	0.005
Lower Lim.	0.005	0.005	0.002851	0.00066

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.045			
6/8/2016		0.02	0.029	
7/28/2016	0.0511			
8/1/2016		0.02	0.02	
9/2/2016				0.0409
9/20/2016	0.0561	0.0203		
9/21/2016			0.0183	
11/8/2016	0.054	0.0191		
11/14/2016			0.0149	0.0182
1/16/2017	0.0528			
1/17/2017		0.0192	<0.0139 (*)	
2/28/2017				0.023
3/1/2017			0.0142	
3/8/2017		0.0189		
3/9/2017	0.0469			
5/2/2017	0.0427	0.019		
5/3/2017			0.0151	
5/9/2017				0.0349
7/7/2017		0.019		
7/10/2017	0.0395		0.0137	
7/13/2017				0.0484
9/22/2017				0.0491
9/29/2017				0.0452
10/6/2017				0.0508
3/30/2018	0.03	0.02	0.012	0.043
6/12/2018	0.024	0.018	0.012	
6/13/2018				0.046
9/26/2018		0.019	0.012	0.048
9/27/2018	0.022			
3/5/2019		0.019		
3/6/2019	0.019		0.012	0.041
4/4/2019	0.019	0.02	0.014	0.042
9/26/2019		0.017	0.01	0.025
9/27/2019	0.018			
Mean	0.03715	0.01918	0.01458	0.03968
Std. Dev.	0.01456	0.0008903	0.005252	0.01047
Upper Lim.	0.04746	0.01981	0.01785	0.04686
Lower Lim.	0.02684	0.01857	0.01096	0.03401

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval

Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.003			
6/8/2016		<0.003	0.012	
7/28/2016	<0.003			
8/1/2016		0.0001 (J)	0.0146	
9/2/2016				0.0003 (J)
9/20/2016	0.0001 (J)	0.0001 (J)		
9/21/2016			0.0149	
11/8/2016	<0.003 (*)	<0.003 (*)		
11/14/2016			0.0152	9E-05 (J)
1/16/2017	0.0001 (J)			
1/17/2017		0.0001 (J)	0.0142	
2/28/2017				0.0001 (J)
3/1/2017			0.015	
3/8/2017		0.0001 (J)		
3/9/2017	0.0001 (J)			
5/2/2017	9E-05 (J)	0.0001 (J)		
5/3/2017			0.0154	
5/9/2017				0.0002 (J)
7/7/2017		0.0001 (J)		
7/10/2017	<0.003		0.0143	
7/13/2017				0.0003 (J)
9/22/2017				0.0003 (J)
9/29/2017				0.0003 (J)
10/6/2017				0.0003 (J)
3/30/2018	<0.003	<0.003	0.018	<0.003 (o)
6/12/2018	8.1E-05 (J)	0.00012 (J)	0.016	
6/13/2018				0.00035 (J)
9/26/2018		0.00014 (J)	0.024 (o)	0.00032 (J)
9/27/2018	9E-05 (J)			
3/5/2019		0.00016 (J)		
3/6/2019	6.6E-05 (J)		0.023	0.00029 (J)
4/4/2019	7.2E-05 (J)	0.00015 (J)	0.025	0.00033 (J)
9/26/2019		0.00014 (J)	0.019	0.00029 (J)
9/27/2019	7.7E-05 (J)			
Mean	0.0005911	0.000415	0.01666	0.0002669
Std. Dev.	0.0007031	0.0005884	0.003704	8.36E-05
Upper Lim.	0.0015	0.0015	0.01914	0.0003199
Lower Lim.	7.7E-05	0.0001	0.014	0.0002508

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.0025			
6/8/2016		<0.0025	0.00098 (J)	
7/28/2016	<0.0025			
8/1/2016		<0.0025	0.0014	
9/2/2016				<0.001 (o)
9/20/2016	<0.0025	<0.0025		
9/21/2016			0.0017	
11/8/2016	7E-05 (J)	<0.0025		
11/14/2016			0.0027	9E-05 (J,o)
1/16/2017	<0.0025			
1/17/2017		<0.0025	0.0033	
2/28/2017				0.0001 (J,o)
3/1/2017			0.0031	
3/8/2017		<0.0025		
3/9/2017	<0.0025			
5/2/2017	<0.0025	<0.0025		
5/3/2017			0.0031	
5/9/2017				0.0002 (J)
7/7/2017		<0.0025		
7/10/2017	<0.0025		0.0029	
7/13/2017				0.0002 (J)
9/22/2017				0.0002 (J)
9/29/2017				0.0002 (J)
10/6/2017				0.0002 (J)
3/30/2018	<0.0025	<0.0025	0.0028	<0.001 (o)
6/12/2018	<0.0025	<0.0025	0.0029	
6/13/2018				0.00019 (J)
9/26/2018		<0.0025	0.0028	0.00018 (J)
9/27/2018	<0.0025			
3/5/2019		<0.0025		
3/6/2019	<0.0025		0.003	0.00015 (J)
4/4/2019	<0.0025	<0.0025	0.0035	0.00019 (J)
9/26/2019		<0.0025	0.0023 (J)	0.00017 (J)
9/27/2019	<0.0025			
Mean	0.002326	0.0025	0.002606	0.000188
Std. Dev.	0.0006494	0	0.0007439	1.687E-05
Upper Lim.	0.0025	0.0025	0.003111	0.0002
Lower Lim.	7E-05	0.0025	0.00222	0.00017

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.0025			
6/8/2016		<0.0025	0.037	
7/28/2016	<0.0025			
8/1/2016		<0.0025	0.0297	
9/2/2016				0.0006 (J)
9/20/2016	<0.0025	<0.0025		
9/21/2016			0.0237	
11/8/2016	<0.0025	<0.0025		
11/14/2016			0.0144	<0.0025
1/16/2017	<0.0025			
1/17/2017		<0.0025	0.0095 (J)	
2/28/2017				<0.0025
3/1/2017			0.0125	
3/8/2017		<0.0025		
3/9/2017	<0.0025			
5/2/2017	<0.0025	<0.0025		
5/3/2017			0.0151	
5/9/2017				<0.0025
7/7/2017		<0.0025		
7/10/2017	<0.0025		0.0121	
7/13/2017				<0.0025
9/22/2017				<0.0025
9/29/2017				<0.0025
10/6/2017				<0.0025
3/30/2018	<0.0025	<0.0025	0.013	<0.0025
6/12/2018	<0.0025	<0.0025	0.014	
6/13/2018				<0.0025
9/26/2018		<0.0025	0.023	<0.0025
9/27/2018	<0.0025			
3/5/2019		<0.0025		
3/6/2019	<0.0025		0.028	<0.0025
4/4/2019	<0.0025	<0.0025	0.031	<0.0025
9/26/2019		<0.0025	0.023	0.00048 (J)
9/27/2019	<0.0025			
Mean	0.0025	0.0025	0.02043	0.00222
Std. Dev.	0	0	0.008622	0.0007121
Upper Lim.	0.0025	0.0025	0.02654	0.0025
Lower Lim.	0.0025	0.0025	0.01432	0.0006

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.303 (U)			
6/8/2016		1.06	0.384 (U)	
7/28/2016	0.386 (U)			
8/1/2016		0.467 (U)	1.55	
9/2/2016				0.873 (U)
9/20/2016	1.47	0.853 (U)		
9/21/2016			2.36	
9/22/2016				0.667 (U)
9/29/2016				1.63
10/6/2016				0.641 (U)
11/8/2016	0.22 (U)	0.433 (U)		
11/14/2016			0.851 (U)	0.0451 (U)
1/16/2017	0.147 (U)			
1/17/2017		0.0759 (U)	1.41 (U)	
2/28/2017				1.34 (U)
3/1/2017			1.13	
3/8/2017		0.479 (U)		
3/9/2017	0.0892 (U)			
5/2/2017	0.149 (U)	0.506 (U)		
5/3/2017			0.584 (U)	
5/9/2017				0.309 (U)
7/7/2017		0.713 (U)		
7/10/2017	0.815 (U)		0.46 (U)	
7/13/2017				0.618 (U)
3/30/2018	0.659 (U)	0.409 (U)	0.607 (U)	0.721 (U)
6/12/2018	1.03 (U)	0.728 (U)	0.633 (U)	
6/13/2018				1.04 (U)
9/26/2018		0.981	1.38	0.604 (U)
9/27/2018	1.06 (U)			
3/5/2019		0.837 (U)		
3/6/2019	0.736 (U)		0.97 (U)	0.919 (U)
4/4/2019	0.474 (U)		1.14	1.05 (U)
4/9/2019		0.502 (U)		
9/26/2019		0.964 (U)	1.08 (U)	0.979 (U)
9/27/2019	0.684 (U)			
Mean	0.5873	0.6434	1.039	0.8169
Std. Dev.	0.4105	0.2776	0.5294	0.4
Upper Lim.	0.878	0.8401	1.413	1.1
Lower Lim.	0.2966	0.4468	0.6635	0.5335

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.3			
6/8/2016		<0.3	0.34	
7/28/2016	0.03 (J)			
8/1/2016		<0.3	0.24 (J)	
9/2/2016				0.05 (J)
9/20/2016	<0.3	<0.3		
9/21/2016			0.22 (J)	
11/8/2016	<0.3	<0.3 (*)		
11/14/2016			0.35	0.18 (J)
1/16/2017	<0.3			
1/17/2017		<0.3	0.22 (J)	
2/28/2017				0.09 (J)
3/1/2017			0.33	
3/8/2017		<0.3 (*)		
3/9/2017	<0.3 (*)			
5/2/2017	<0.3	<0.3		
5/3/2017			0.2 (J)	
5/9/2017				0.009 (J)
7/7/2017		<0.3		
7/10/2017	<0.3 (*)		0.57	
7/13/2017				<0.3
9/22/2017				0.09 (J)
9/29/2017				<0.3
10/5/2017		<0.3		
10/6/2017				<0.3
10/11/2017	<0.3		<0.3 (*)	<0.3 (*)
3/30/2018	<0.3	<0.3	1.4	<0.3
6/12/2018	<0.3	<0.3	0.18 (J)	
6/13/2018				<0.3
9/26/2018		<0.3	0.07 (J)	<0.3
9/27/2018	<0.3			
3/5/2019		<0.3		
3/6/2019	<0.3		0.49	<0.3
4/4/2019	0.049 (J)	0.033 (J)	0.57	0.043 (J)
9/26/2019		0.098 (J)	0.48	0.094 (J)
9/27/2019	0.12 (J)			
10/10/2019	0.11 (J)	0.03 (J)		<0.3
Mean	0.2443	0.2538	0.3973	0.2035
Std. Dev.	0.1016	0.1003	0.3141	0.1181
Upper Lim.	0.3	0.3	0.5468	0.3
Lower Lim.	0.11	0.098	0.2056	0.05

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.00044 (J)			
6/8/2016		<0.005	<0.005 (*)	
7/28/2016	<0.005			
8/1/2016		<0.005	0.0005 (J)	
9/2/2016				0.0017 (J)
9/20/2016	<0.005	<0.005		
9/21/2016			0.0006 (J)	
11/8/2016	<0.005	<0.005		
11/14/2016			0.0012 (J)	0.0002 (J)
1/16/2017	<0.005			
1/17/2017		<0.005	0.002 (J)	
2/28/2017				0.0003 (J)
3/1/2017			0.002 (J)	
3/8/2017		<0.005		
3/9/2017	<0.005			
5/2/2017	<0.005	<0.005		
5/3/2017			<0.005 (*)	
5/9/2017				0.0004 (J)
7/7/2017		<0.005		
7/10/2017	<0.005		0.0018 (J)	
7/13/2017				0.0004 (J)
9/22/2017				0.0003 (J)
9/29/2017				0.0002 (J)
10/6/2017				0.0002 (J)
3/30/2018	<0.005	<0.005	<0.005	<0.005
3/5/2019		<0.005		
3/6/2019	<0.005		0.0012 (J)	<0.005
4/4/2019	<0.005	<0.005	0.0014 (J)	0.00037 (J)
9/26/2019		<0.005	0.00087 (J)	0.00023 (J)
9/27/2019	0.00013 (J)			
Mean	0.004214	0.005	0.002214	0.001192
Std. Dev.	0.001837	0	0.001748	0.001826
Upper Lim.	0.005	0.005	0.005	0.005
Lower Lim.	0.00044	0.005	0.0006	0.0002

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.005 (o)			
6/8/2016		<0.01	0.0099	
7/28/2016	0.0019 (J)			
8/1/2016		<0.01	0.0142 (J)	
9/2/2016				0.0029 (J)
9/20/2016	0.0021 (J)	<0.01		
9/21/2016			0.0145 (J)	
11/8/2016	0.0024 (J)	<0.01		
11/14/2016			0.0253 (J)	0.0044 (J)
1/16/2017	0.0022 (J)			
1/17/2017		<0.01	0.0256 (J)	
2/28/2017				0.0038 (J)
3/1/2017			0.0219 (J)	
3/8/2017		<0.01		
3/9/2017	0.0025 (J)			
5/2/2017	0.0019 (J)	<0.01		
5/3/2017			0.0217 (J)	
5/9/2017				0.0057 (J)
7/7/2017		<0.01		
7/10/2017	0.0018 (J)		0.0214 (J)	
7/13/2017				0.007 (J)
9/22/2017				0.0067 (J)
9/29/2017				0.0064 (J)
10/6/2017				0.0065 (J)
3/30/2018	0.0039 (J)	<0.01	0.024 (J)	0.0061 (J)
6/12/2018	0.0017 (J)	<0.01	0.023 (J)	
6/13/2018				0.0065 (J)
9/26/2018		<0.01	0.034 (J)	0.0063 (J)
9/27/2018	0.0017 (J)			
3/5/2019		<0.01		
3/6/2019	0.0025 (J)		0.033 (J)	0.0057 (J)
4/4/2019	0.0018 (J)	<0.01	0.035 (J)	0.0058 (J)
9/26/2019		<0.01	0.028	0.0041 (J)
9/27/2019	0.0017 (J)			
Mean	0.002162	0.01	0.02368	0.005564
Std. Dev.	0.0006021	0	0.007459	0.001254
Upper Lim.	0.0025	0.01	0.02896	0.006434
Lower Lim.	0.0017	0.01	0.01839	0.004842

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	0.037			
6/8/2016		<0.01	0.0011 (J)	
7/28/2016	0.0385			
8/1/2016		<0.01	0.0192	
9/2/2016				0.0012 (J)
9/20/2016	0.0464	<0.01		
9/21/2016			0.0147	
11/8/2016	0.0521	<0.01		
11/14/2016			<0.01	<0.01
1/16/2017	0.0469			
1/17/2017		<0.01	0.0122	
2/28/2017				0.0017 (J)
3/1/2017			0.0151	
3/8/2017		<0.01		
3/9/2017	0.0437			
5/2/2017	0.0395	<0.01		
5/3/2017			0.012	
5/9/2017				0.0018 (J)
7/7/2017		<0.01		
7/10/2017	0.0386		0.0106	
7/13/2017				0.0031 (J)
9/22/2017				0.0024 (J)
9/29/2017				0.002 (J)
10/6/2017				<0.01
3/30/2018	0.028	<0.01	0.011	<0.01
6/12/2018	0.026	<0.01	0.0057 (J)	
6/13/2018				0.0024 (J)
9/26/2018		<0.01	0.016	0.0037 (J)
9/27/2018	0.023			
3/5/2019		<0.01		
3/6/2019	0.019		0.013	0.0033 (J)
4/4/2019	0.017	<0.01	0.012	0.0029 (J)
9/26/2019		<0.01	0.011	0.0019 (J)
9/27/2019	0.018			
Mean	0.03384	0.01	0.01169	0.004029
Std. Dev.	0.01181	0	0.004393	0.003306
Upper Lim.	0.0422	0.01	0.0148	0.01
Lower Lim.	0.02547	0.01	0.008574	0.0018

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 11/18/2019 7:05 PM View: AP-3-A-B-B` Confidence Interval
Plant Yates Client: Southern Company Data: Plant Yates

	YGWC-23S	YGWC-24S	YGWC-33S	YGWC-36
6/7/2016	<0.001			
6/8/2016		<0.001	<0.001	
7/28/2016	<0.001			
8/1/2016		<0.001	6E-05 (J)	
9/2/2016				<0.001
9/20/2016	<0.001	<0.001		
9/21/2016			<0.001	
11/8/2016	<0.001	<0.001		
11/14/2016			<0.001	<0.001
1/16/2017	<0.001			
1/17/2017		<0.001	0.0004 (J)	
2/28/2017				<0.001
3/1/2017			0.0003 (J)	
3/8/2017		<0.001		
3/9/2017	<0.001			
5/2/2017	<0.001	<0.001		
5/3/2017			0.0002 (J)	
5/9/2017				<0.001
7/7/2017		<0.001		
7/10/2017	<0.001		0.0002 (J)	
7/13/2017				<0.001
9/22/2017				<0.001
9/29/2017				<0.001
10/6/2017				<0.001
3/30/2018	<0.001	<0.001	<0.001	<0.001
3/5/2019		<0.001		
3/6/2019	<0.001		0.00016 (J)	<0.001
4/4/2019	<0.001	<0.001	0.00018 (J)	<0.001
9/26/2019		<0.001	0.00014 (J)	<0.001
9/27/2019	<0.001			
Mean	0.001	0.001	0.00047	0.001
Std. Dev.	0	0	0.0004	0
Upper Lim.	0.001	0.001	0.001	0.001
Lower Lim.	0.001	0.001	0.00014	0.001

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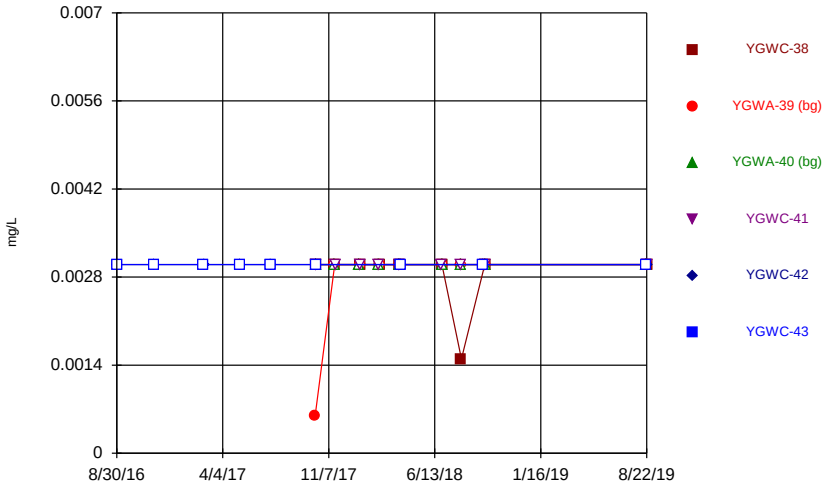
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 11/18/2019 11:41 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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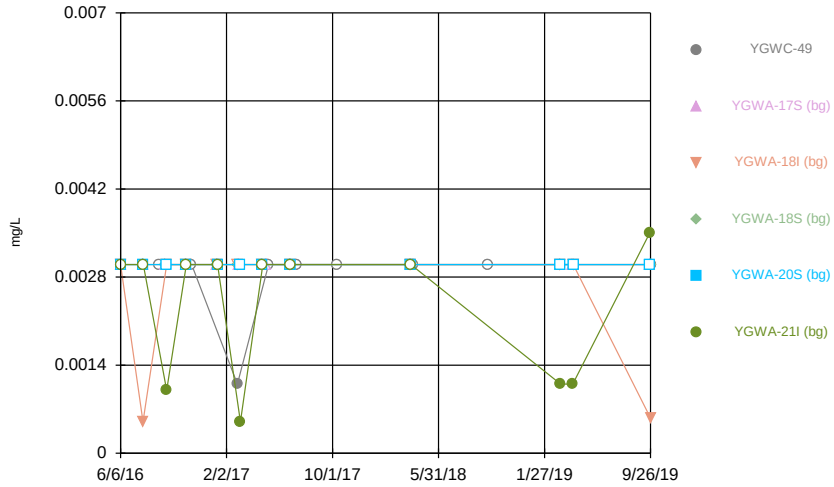
Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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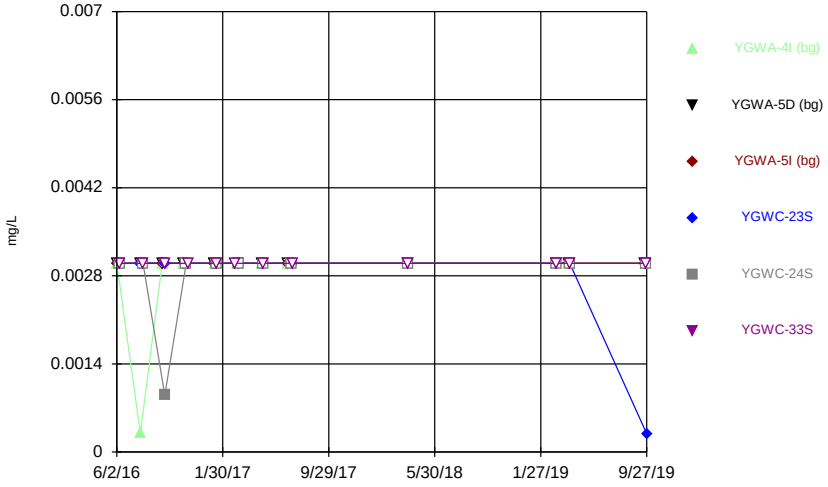
Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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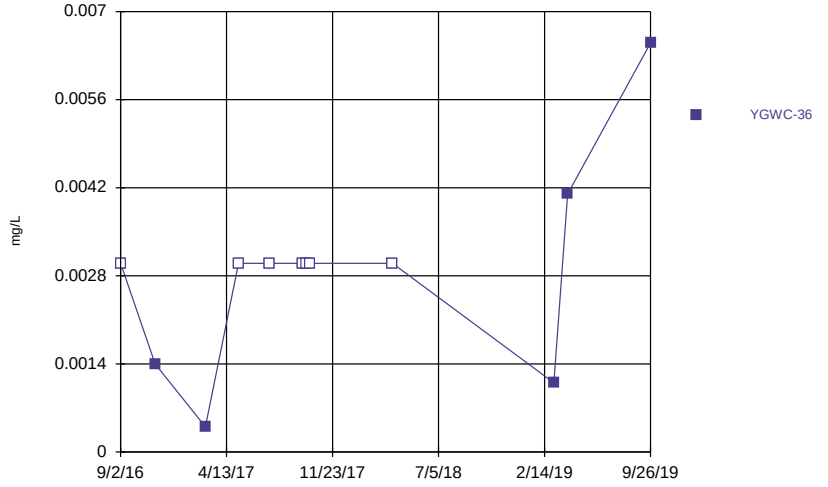
Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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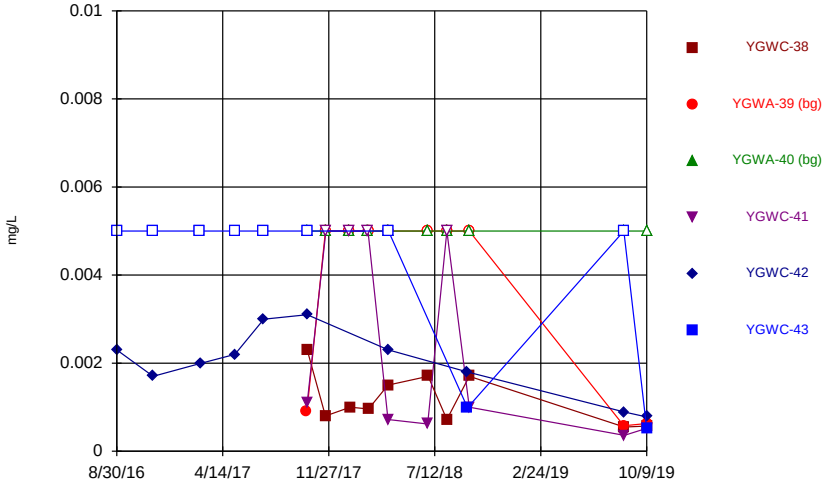
Time Series



Constituent: Arsenic Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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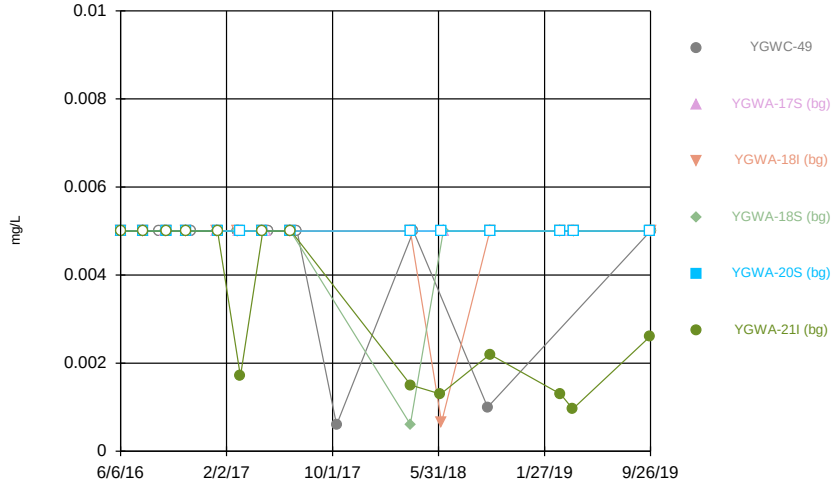
Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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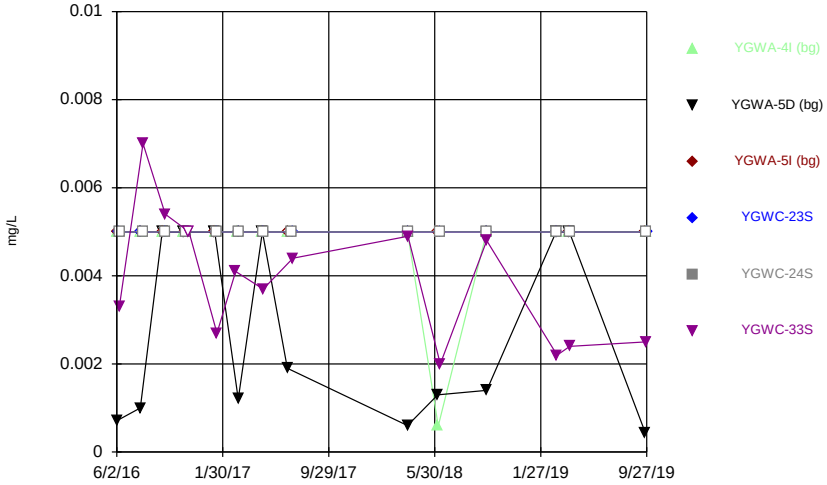

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Plant Yates Client: Southern Company Data: Plant Yates

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Hollow symbols indicate censored values.

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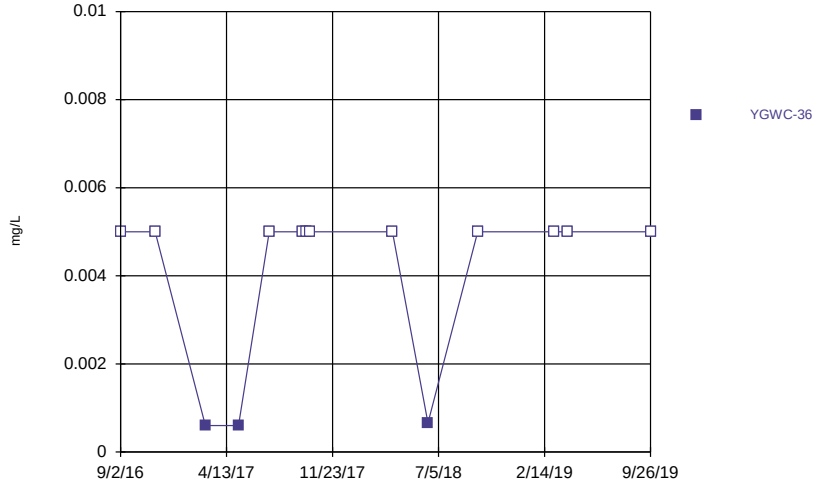

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Plant Yates Client: Southern Company Data: Plant Yates

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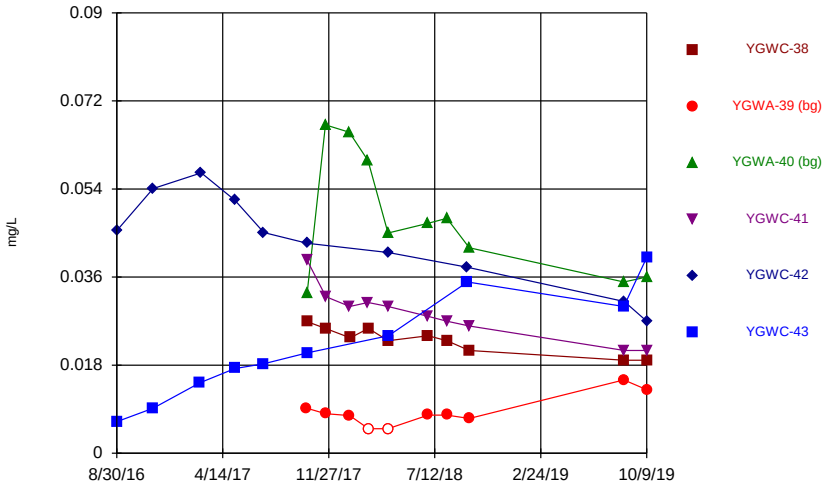
Time Series



Constituent: Barium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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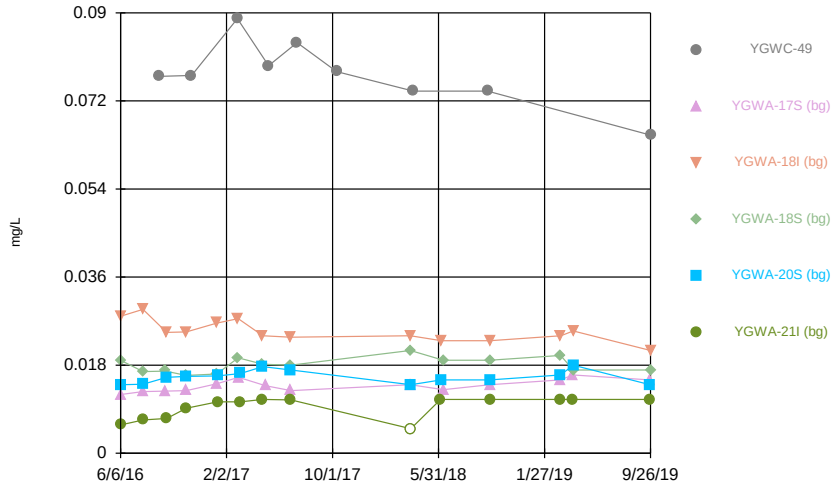
Hollow symbols indicate censored values.

Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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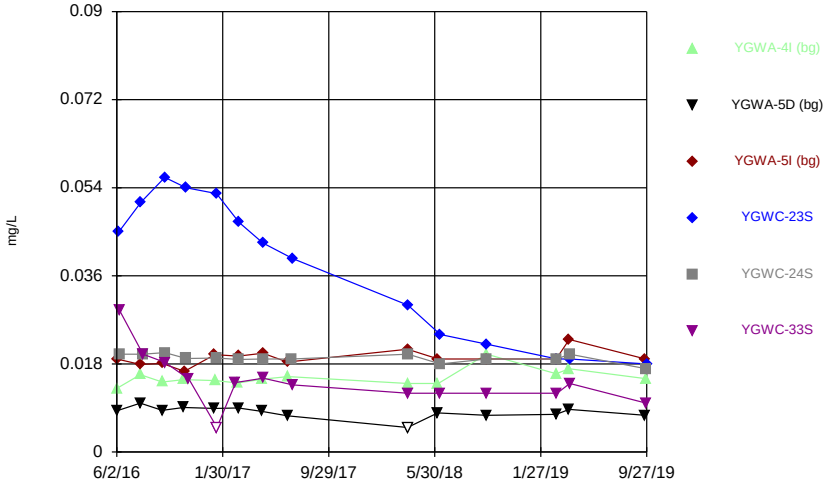
Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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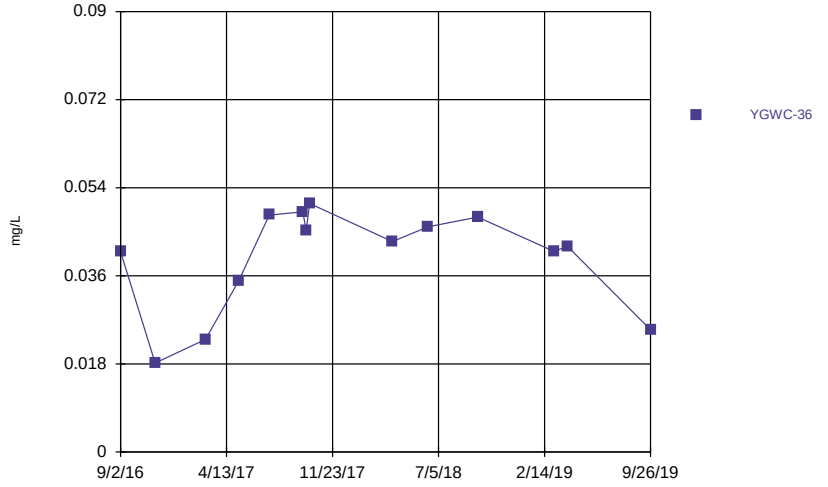
Time Series



Constituent: Barium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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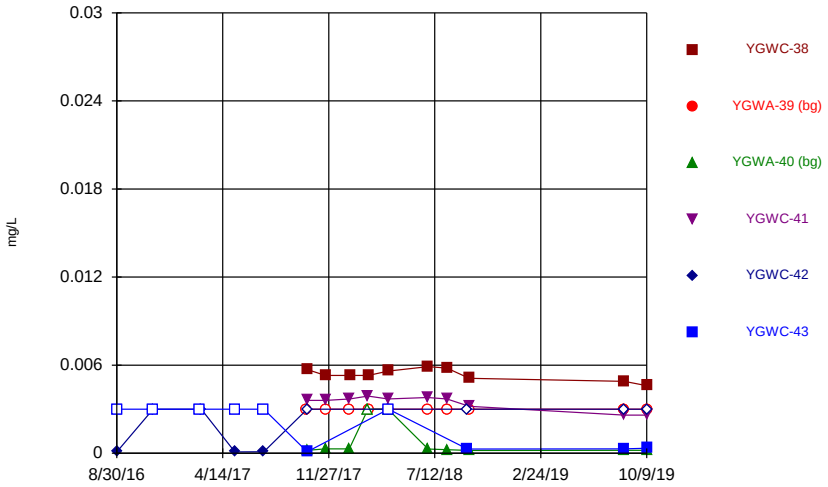
Hollow symbols indicate censored values.

Time Series



Constituent: Beryllium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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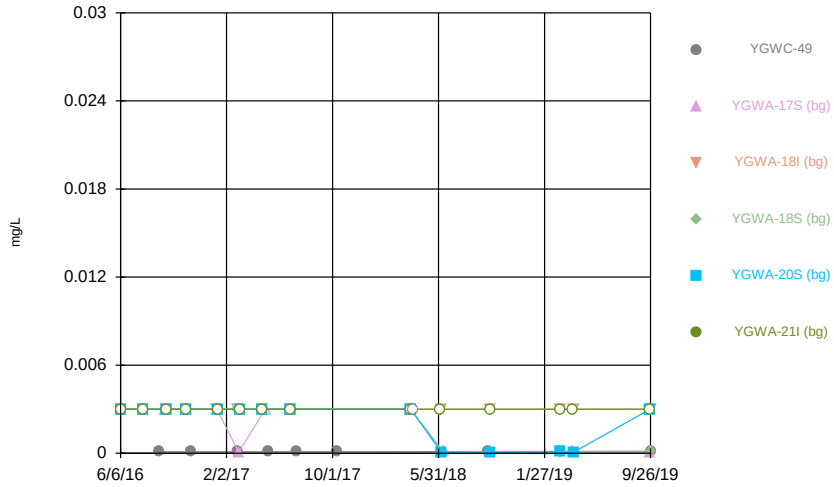
Hollow symbols indicate censored values.

Time Series



Constituent: Beryllium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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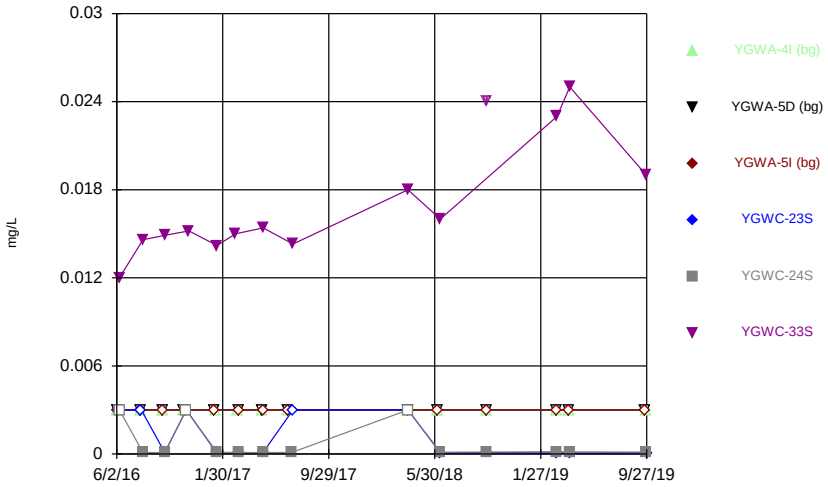
Hollow symbols indicate censored values.

Time Series



Constituent: Beryllium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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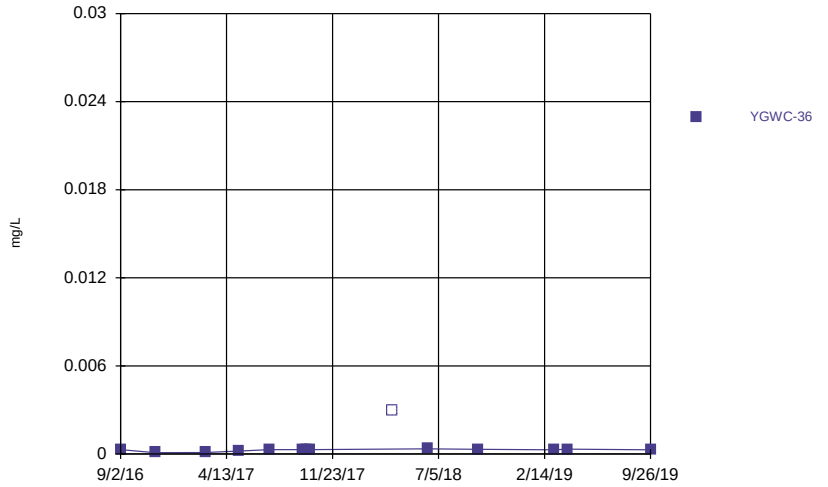
Hollow symbols indicate censored values.

Time Series



Constituent: Beryllium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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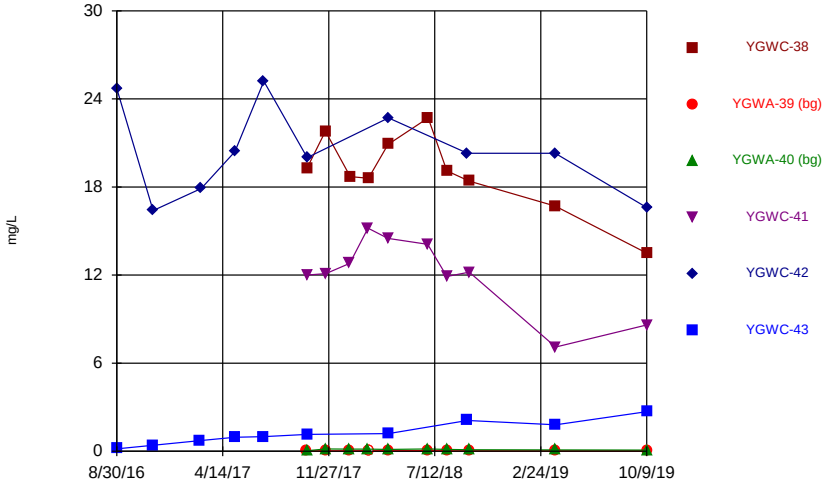
Hollow symbols indicate censored values.

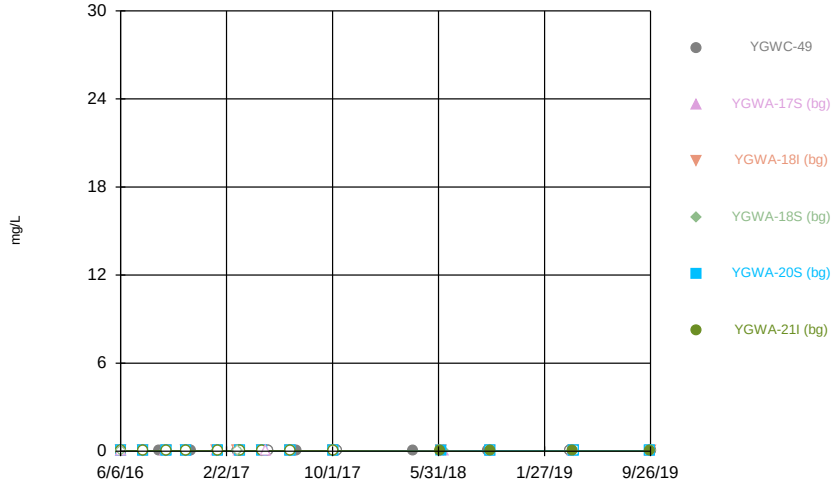
Time Series



Constituent: Boron Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

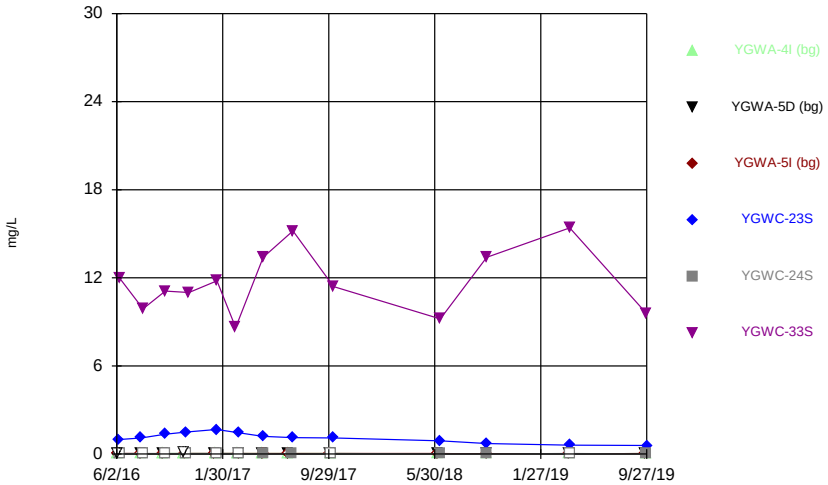
Time Series



Constituent: Boron Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

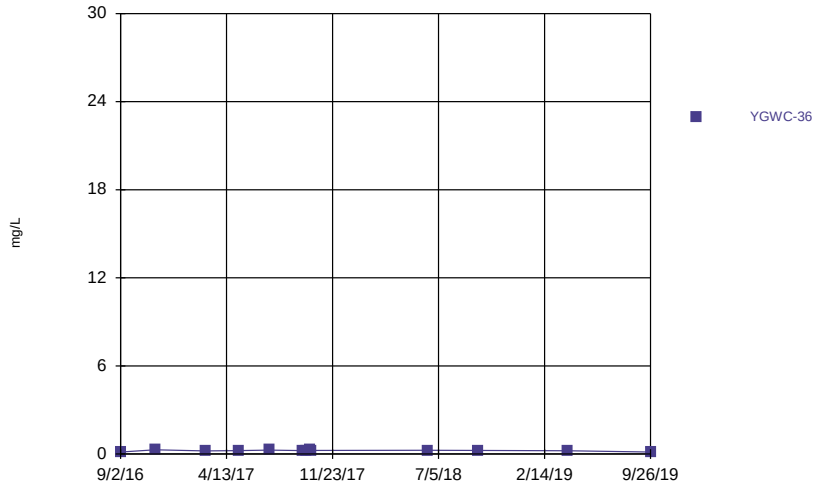
Time Series



Constituent: Boron Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

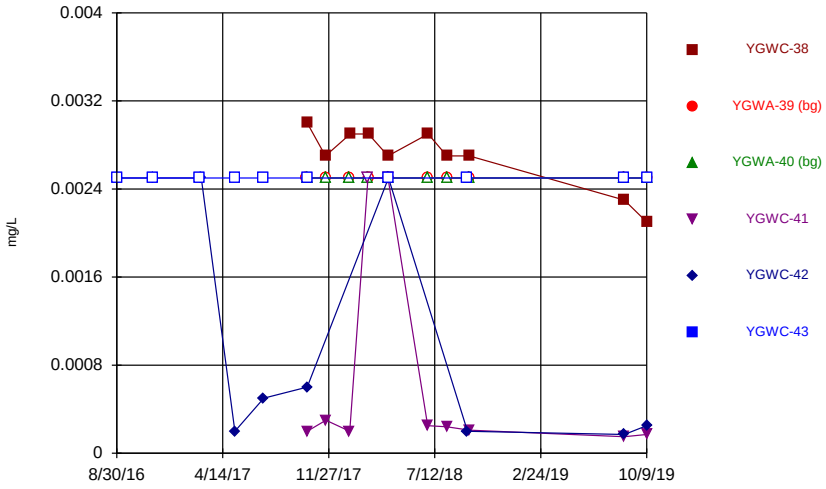
Time Series



Constituent: Boron Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

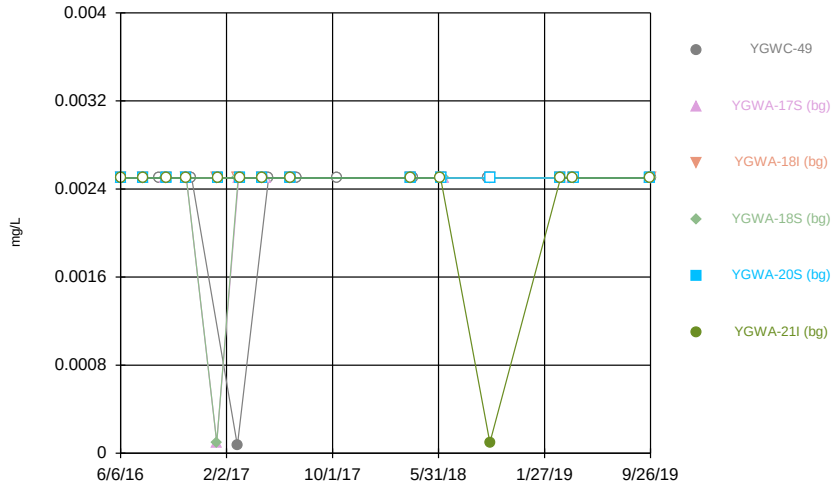
Time Series



Constituent: Cadmium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

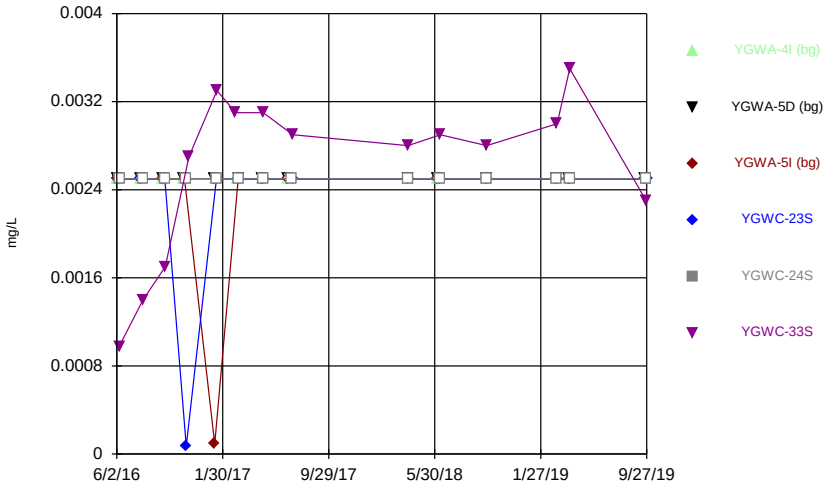
Time Series



Constituent: Cadmium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

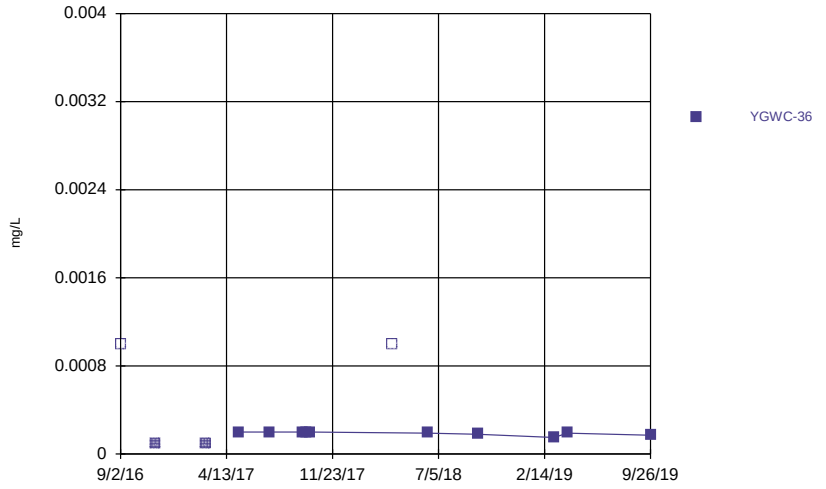
Time Series



Constituent: Cadmium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

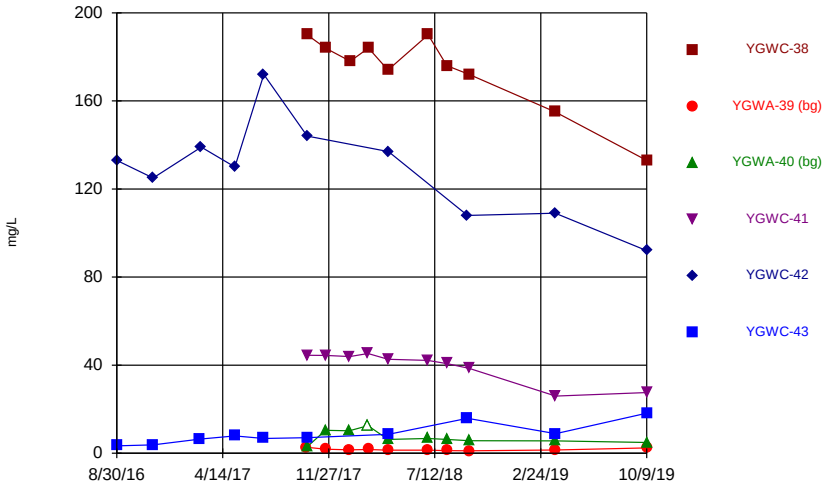
Time Series



Constituent: Cadmium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

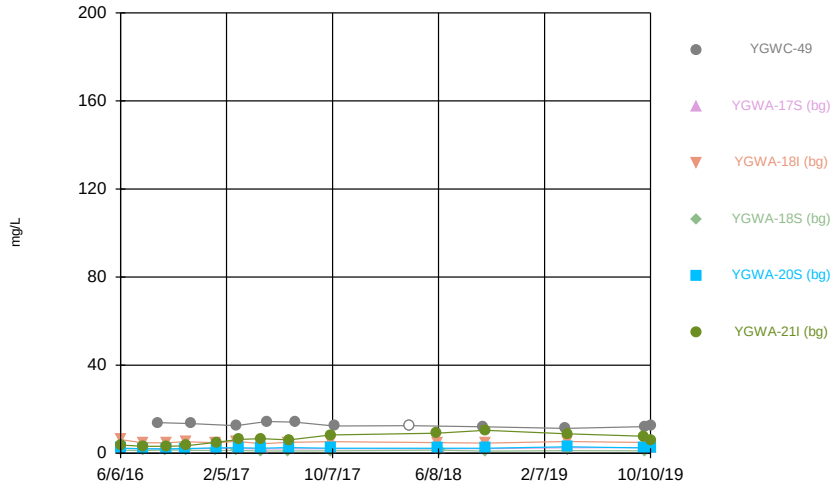
Time Series



Constituent: Calcium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

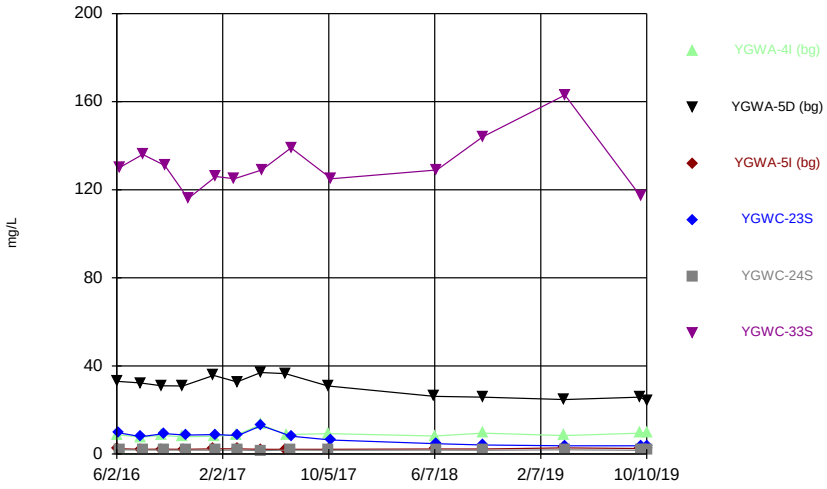
Time Series



Constituent: Calcium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

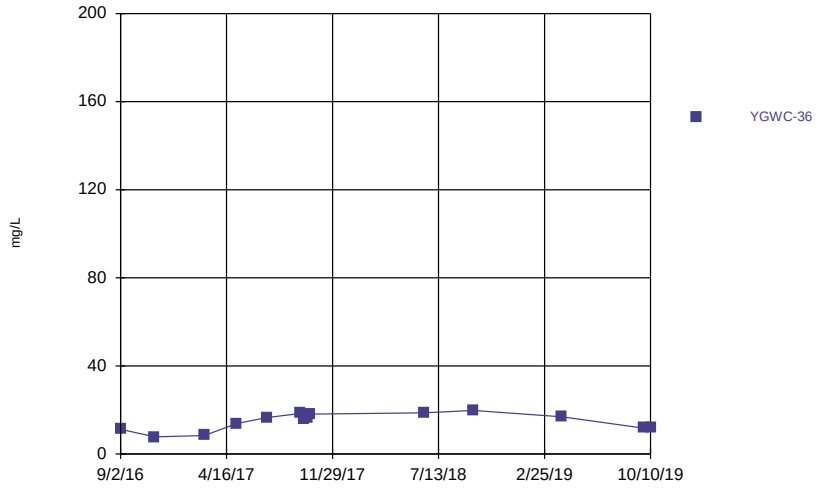
Time Series



Constituent: Calcium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

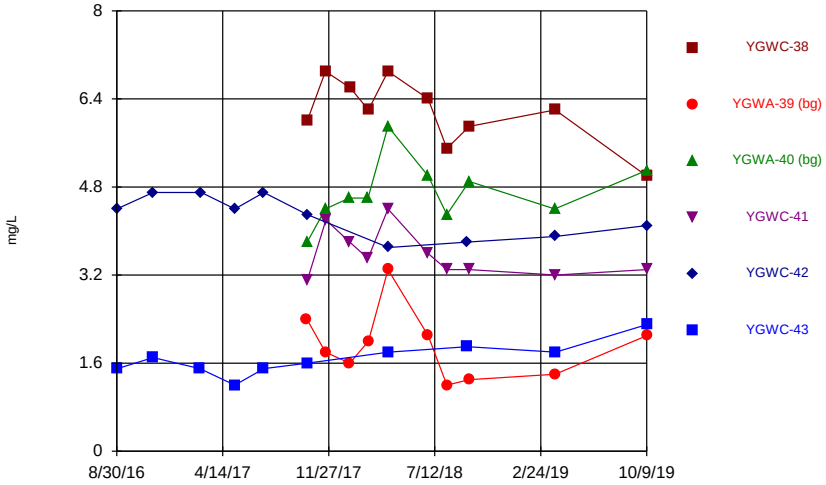
Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Time Series



Constituent: Calcium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

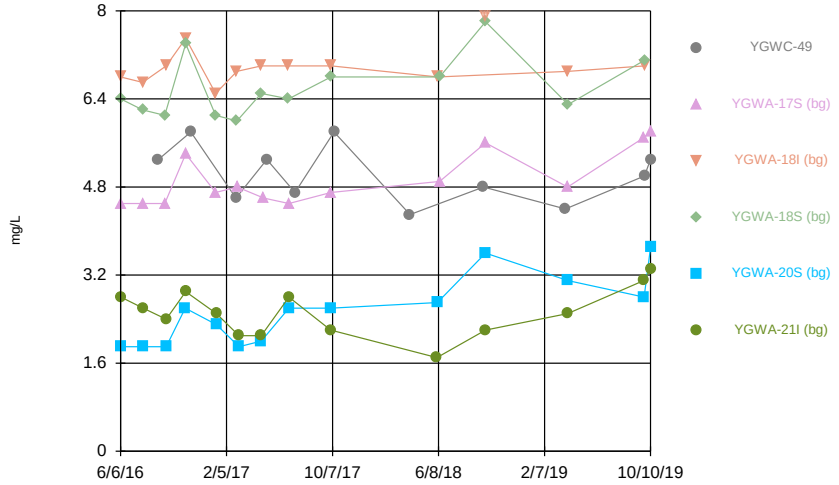
Time Series



Constituent: Chloride Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

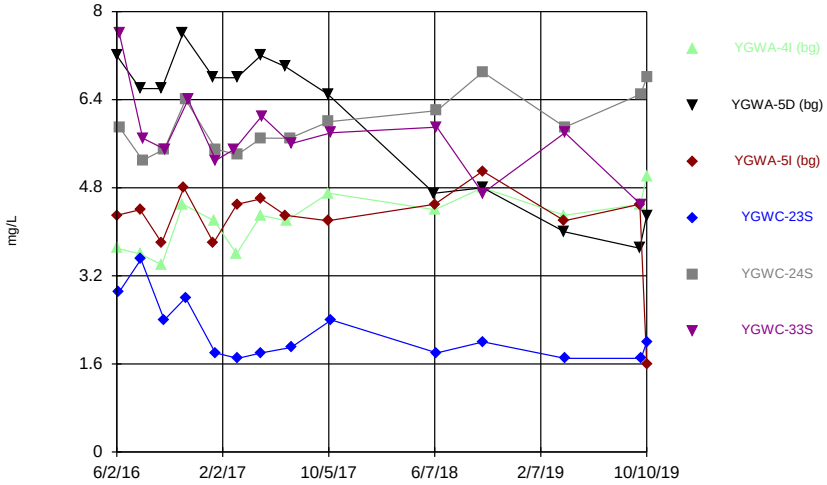
Time Series



Constituent: Chloride Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

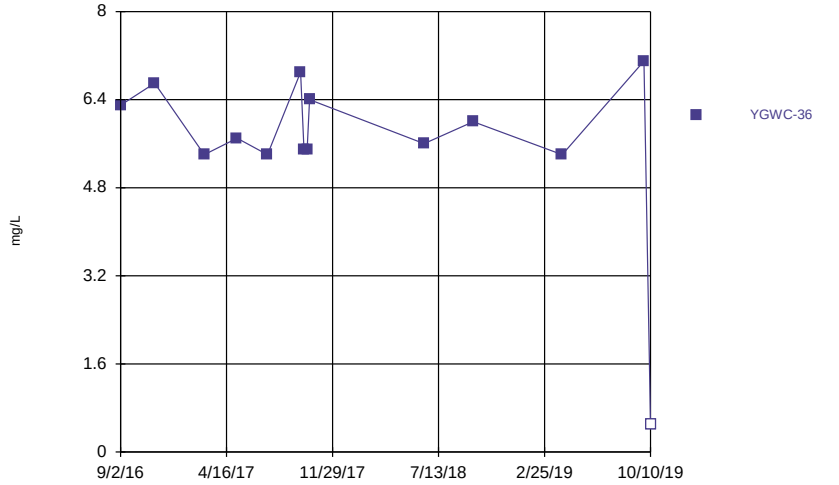
Time Series



Constituent: Chloride Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

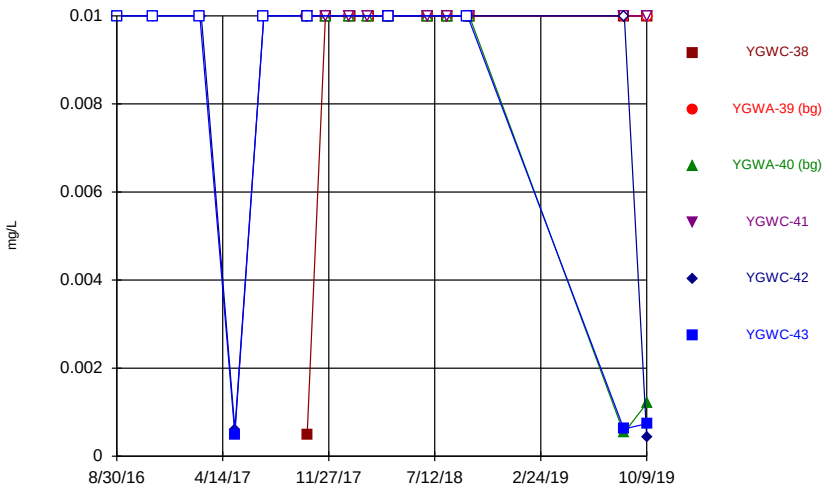
Time Series



Constituent: Chloride Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

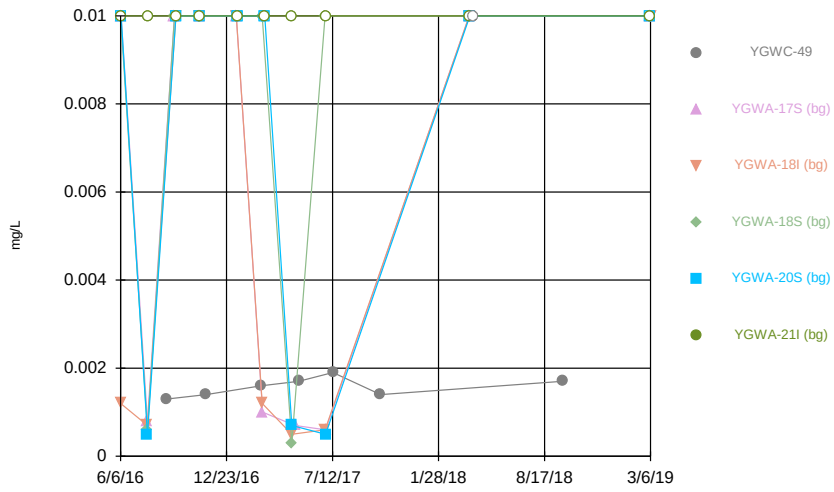
Time Series



Constituent: Chromium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

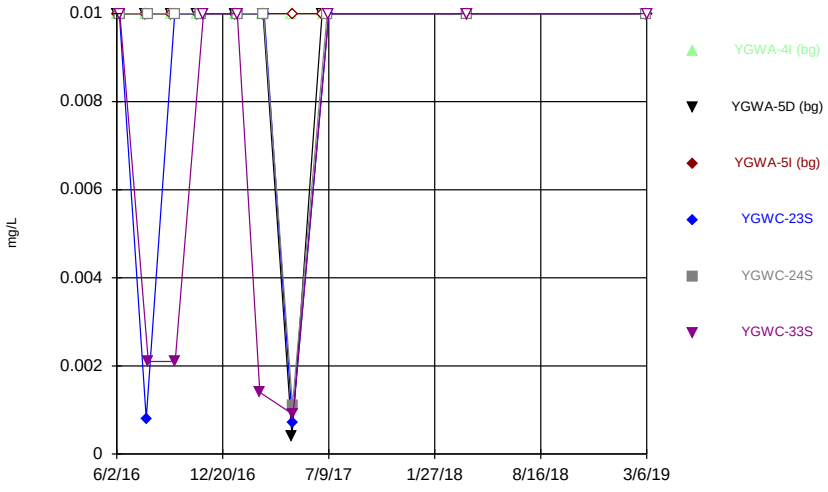
Time Series



Constituent: Chromium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

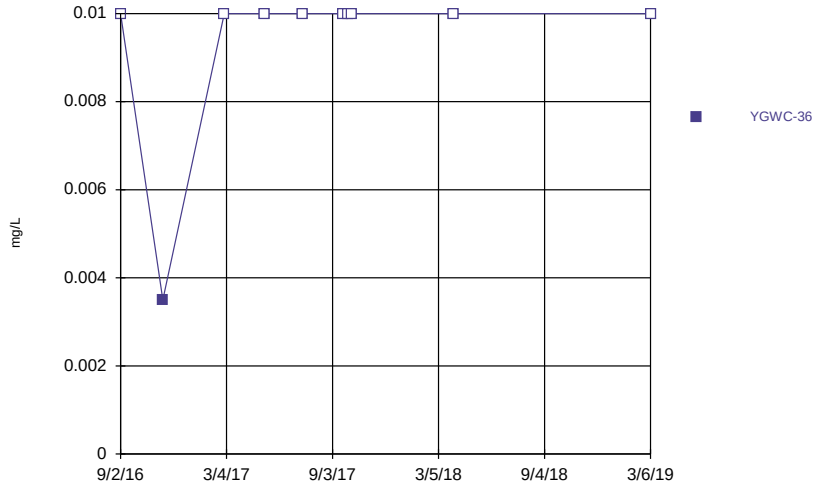
Time Series



Constituent: Chromium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

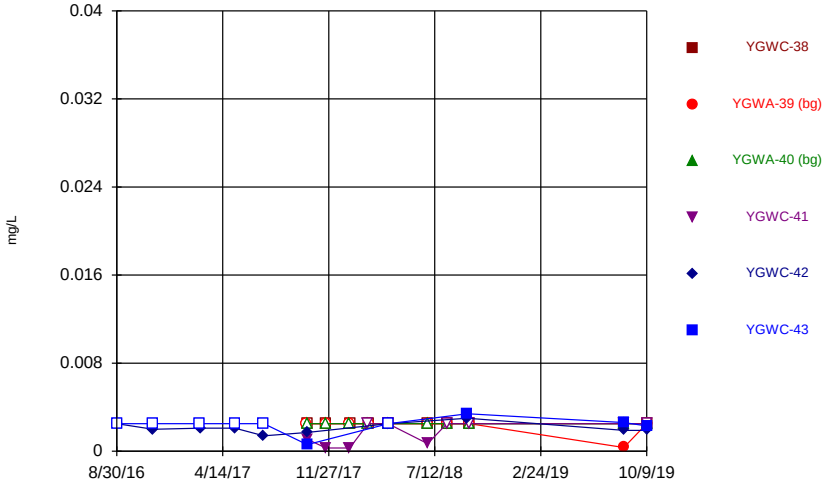
Time Series



Constituent: Chromium Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

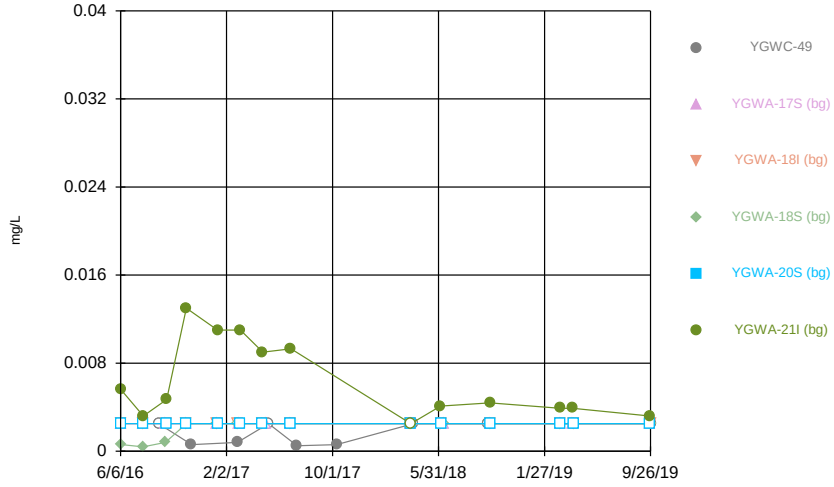
Time Series



Constituent: Cobalt Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

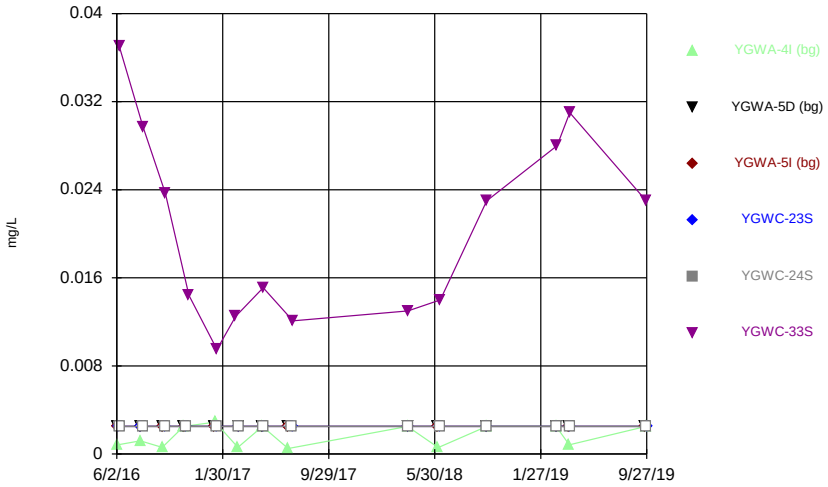
Time Series



Constituent: Cobalt Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

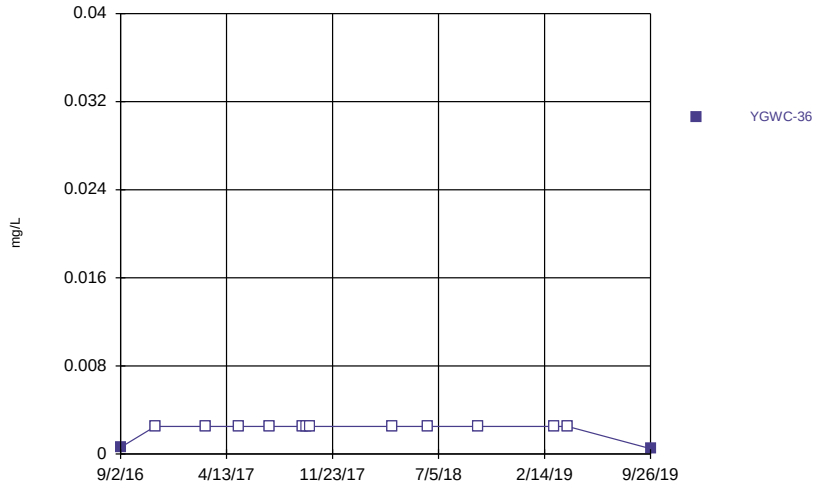
Time Series



Constituent: Cobalt Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

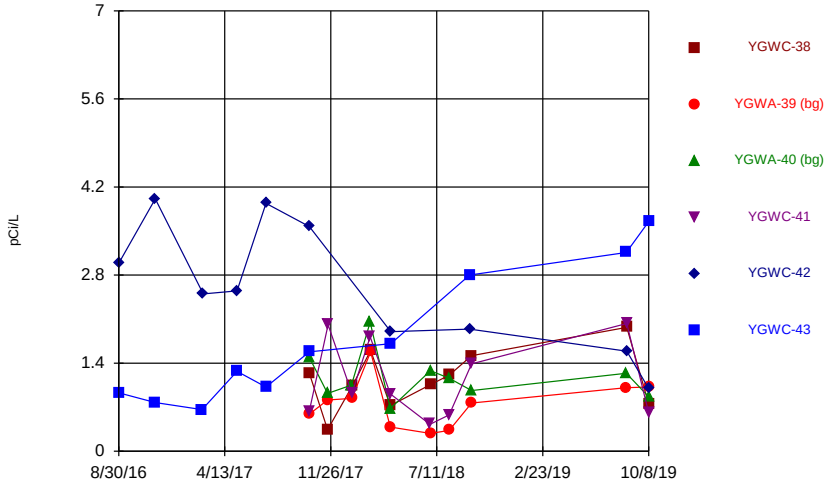
Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Cobalt Analysis Run 11/18/2019 11:42 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

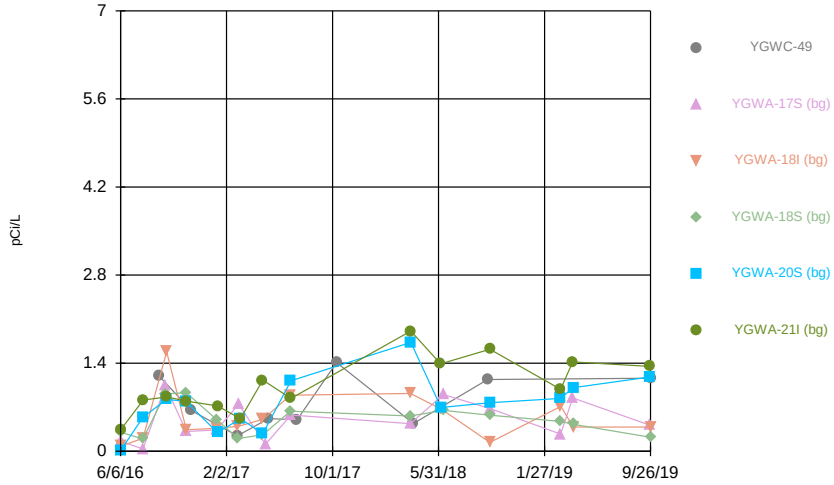
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

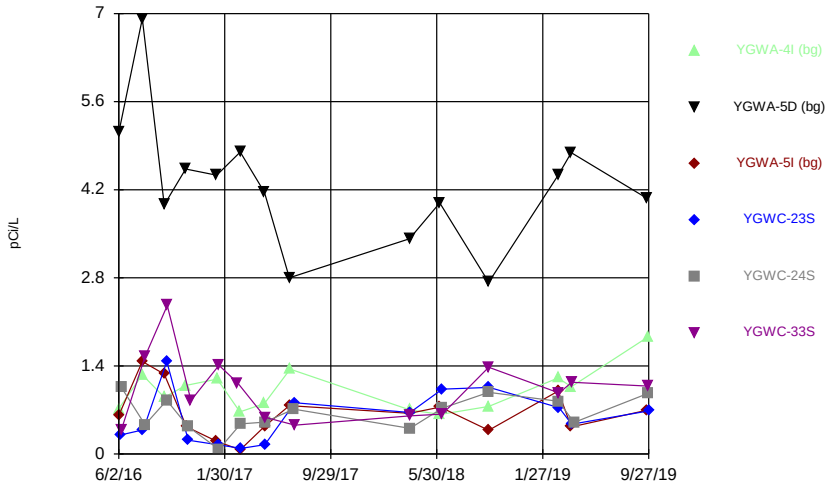
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

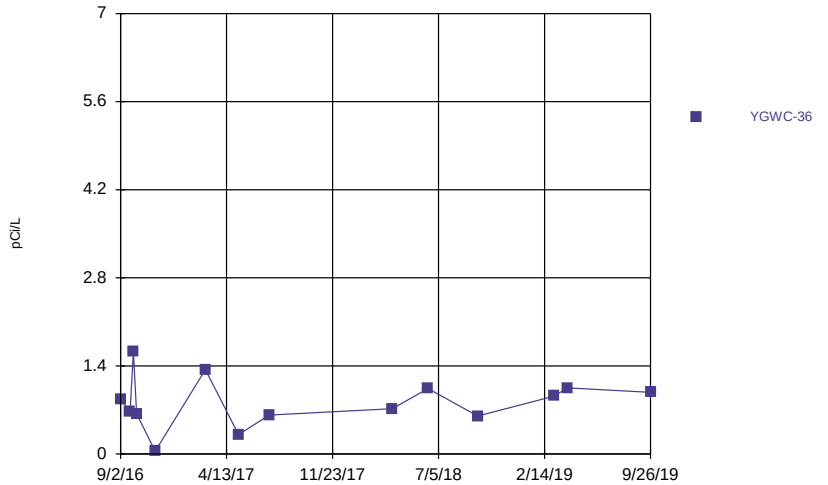
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

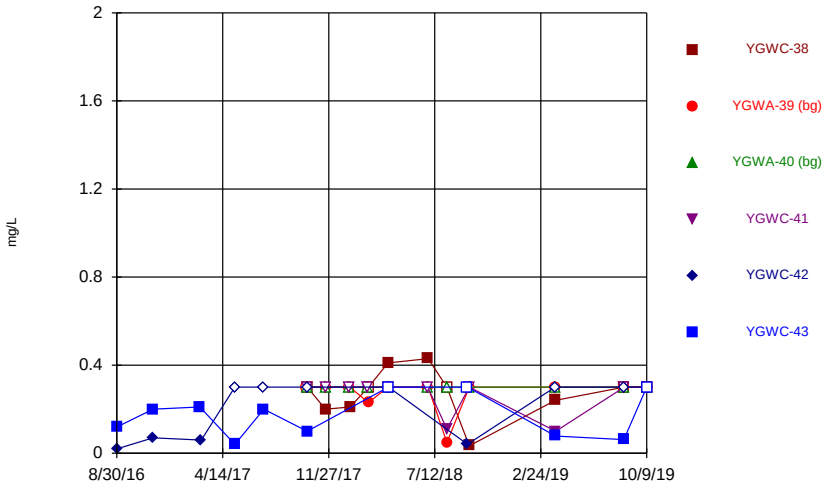
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

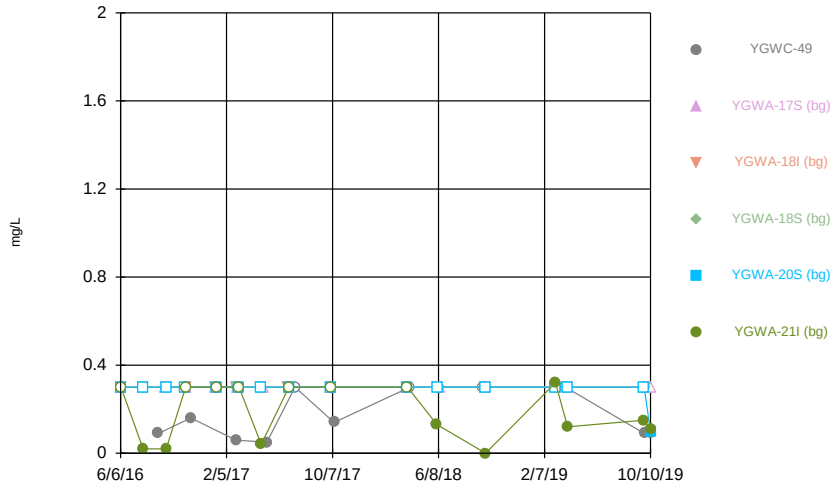
Time Series



Constituent: Fluoride Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

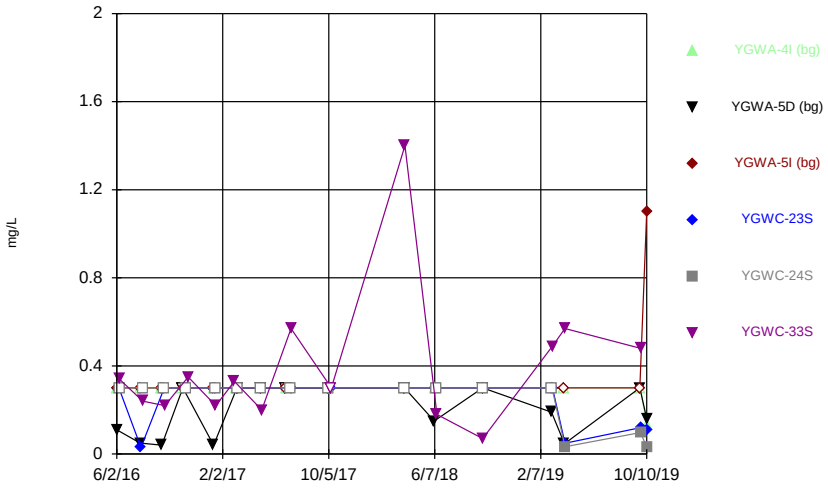
Time Series



Constituent: Fluoride Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

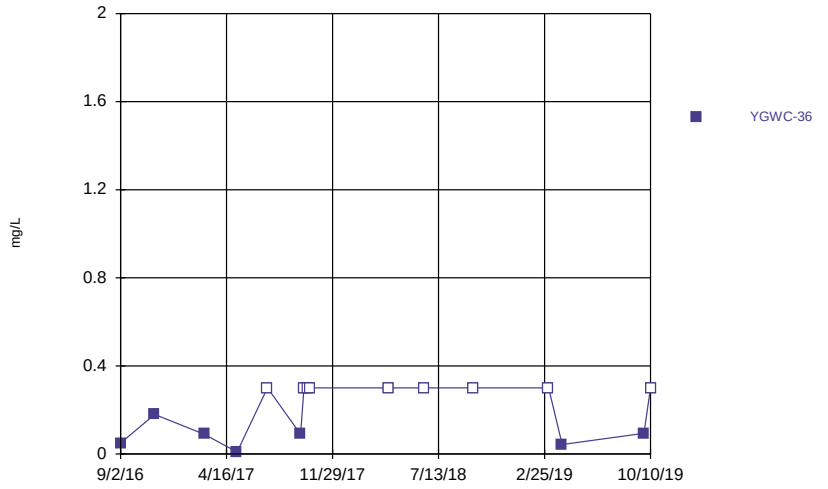
Time Series



Constituent: Fluoride Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

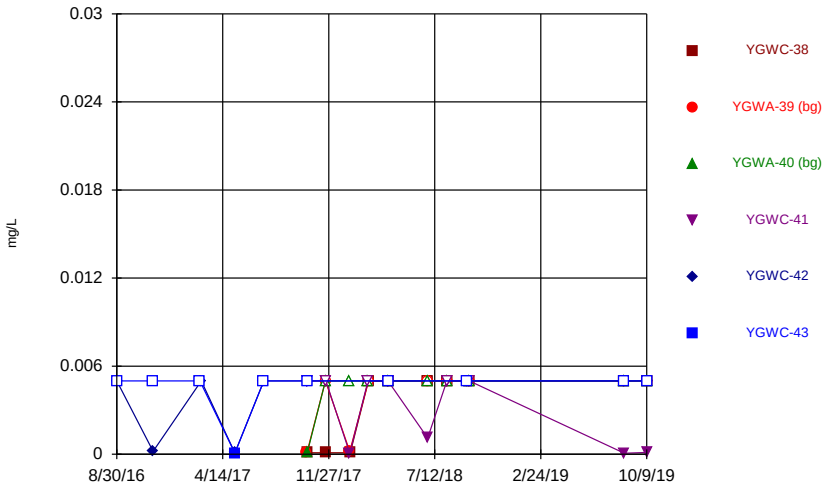
Time Series



Constituent: Fluoride Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

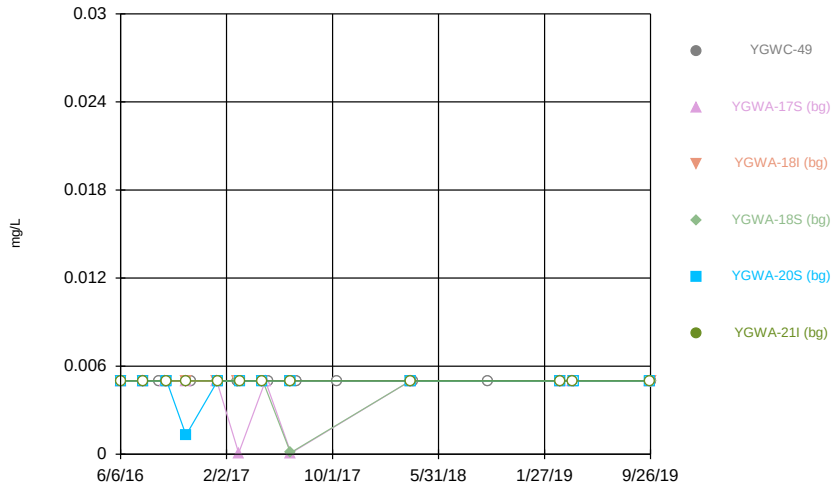
Time Series



Constituent: Lead Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

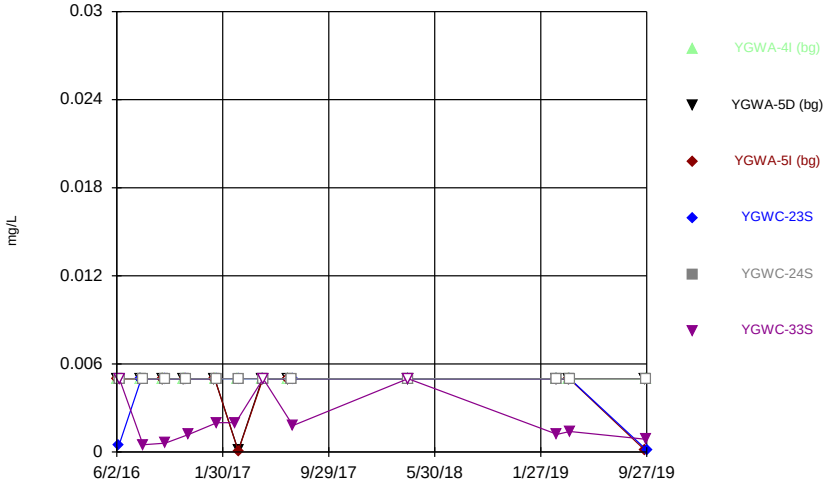
Time Series



Constituent: Lead Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

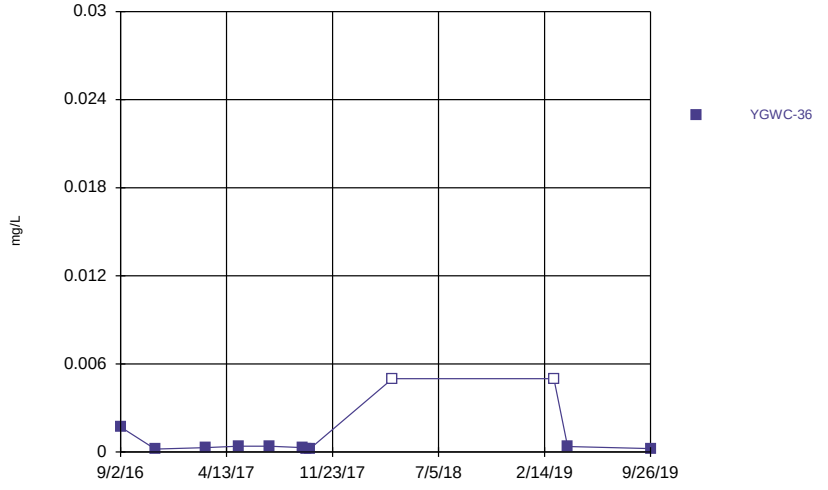
Time Series



Constituent: Lead Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

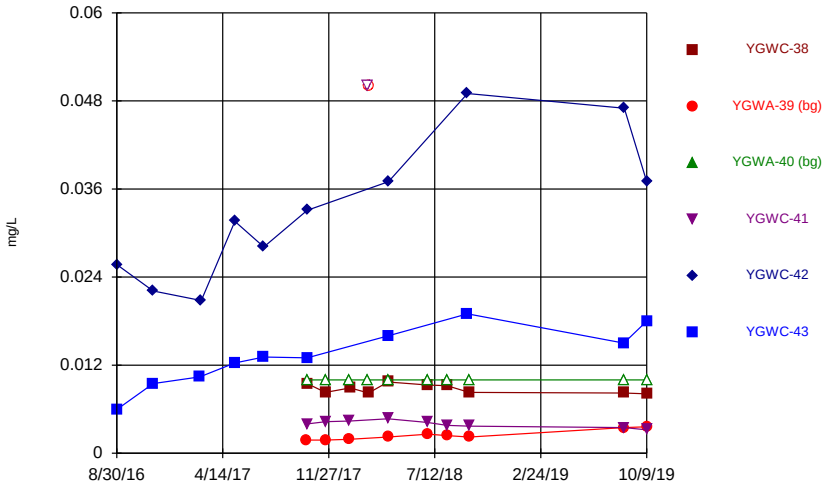
Time Series



Constituent: Lead Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

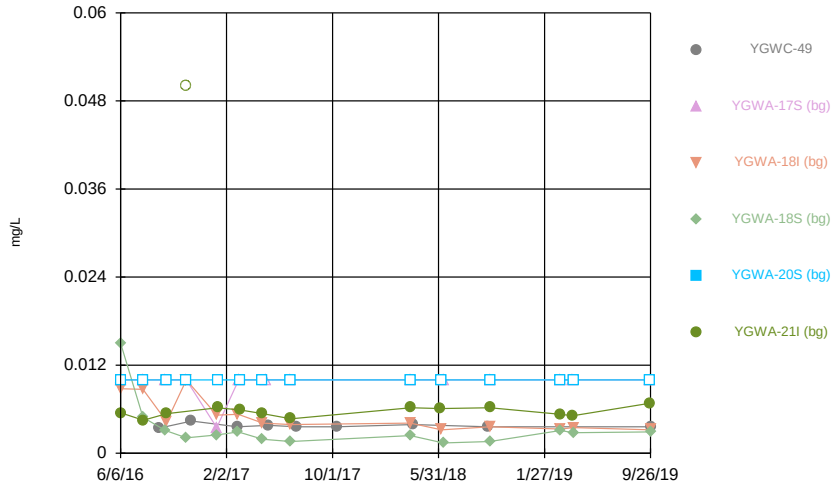
Time Series



Constituent: Lithium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

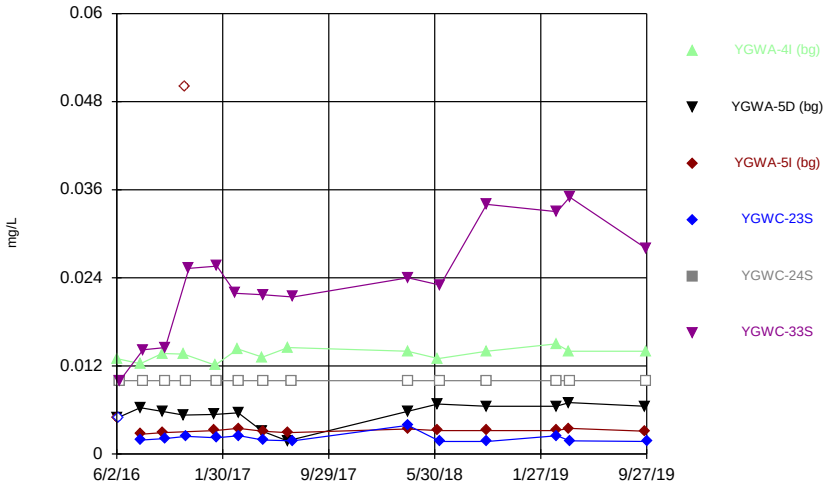
Time Series



Constituent: Lithium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

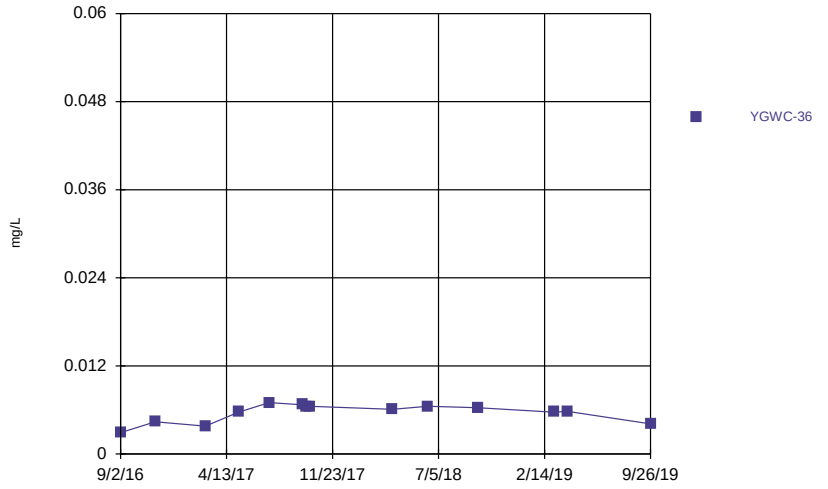
Time Series



Constituent: Lithium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

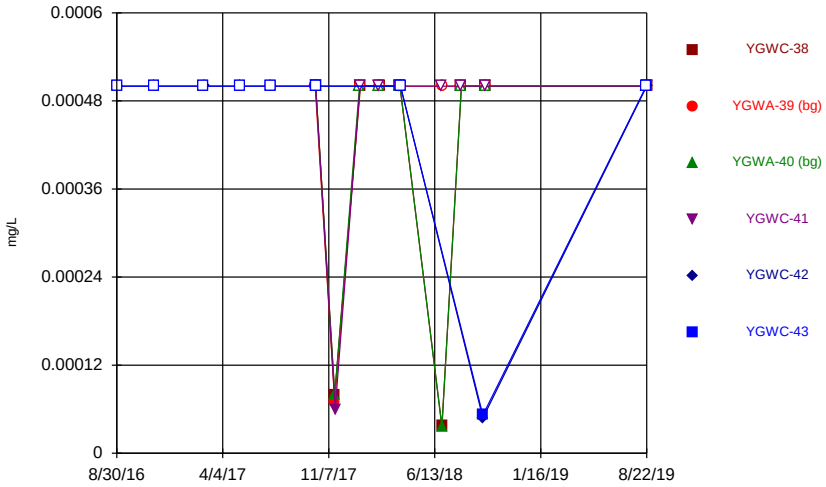
Time Series



Constituent: Lithium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Mercury Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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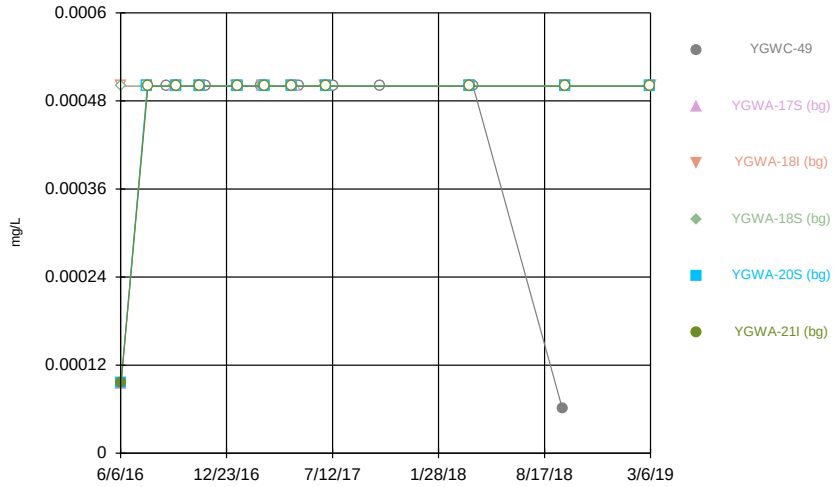
Hollow symbols indicate censored values.

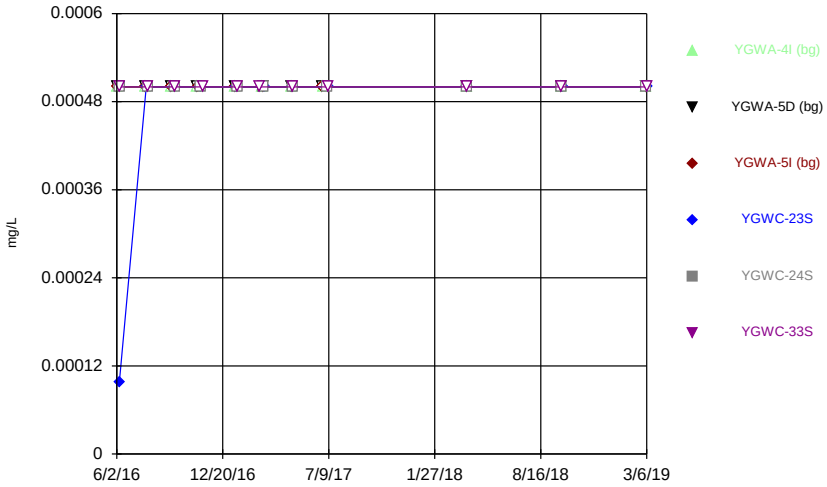
Time Series



Constituent: Mercury Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Mercury Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
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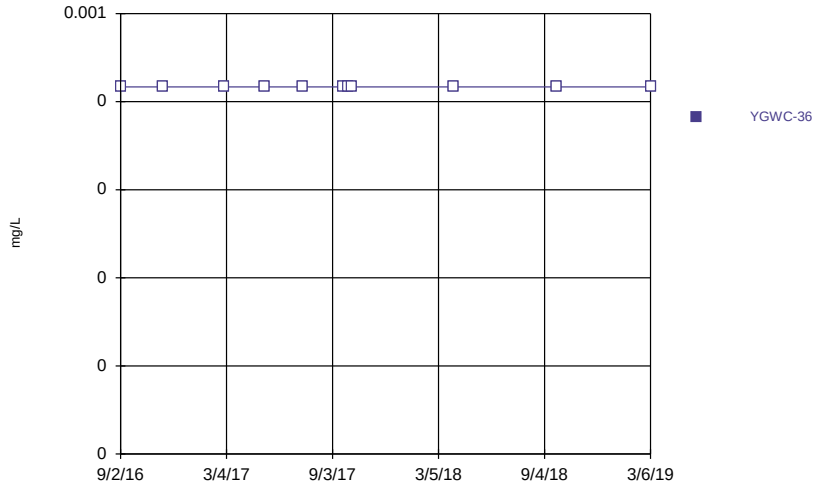
Time Series



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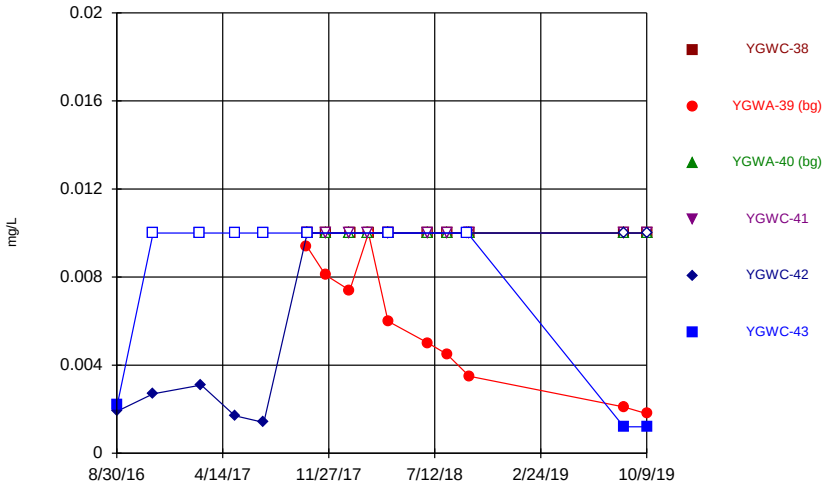
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Molybdenum Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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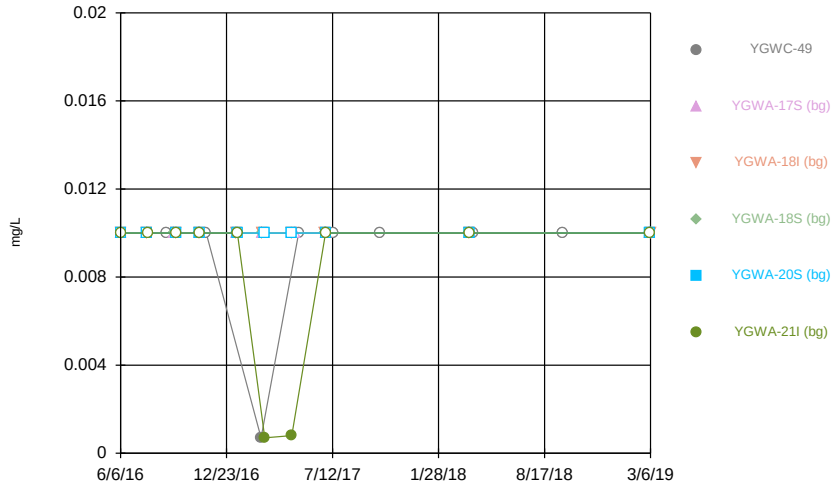
Hollow symbols indicate censored values.

Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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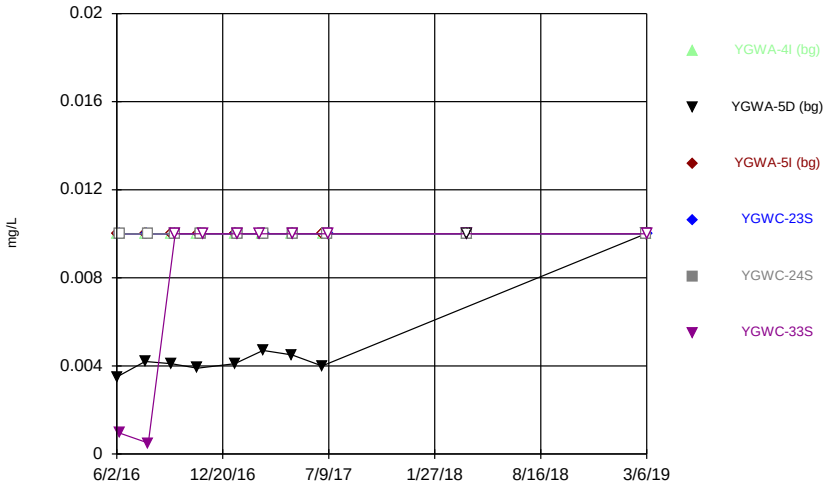

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Plant Yates Client: Southern Company Data: Plant Yates

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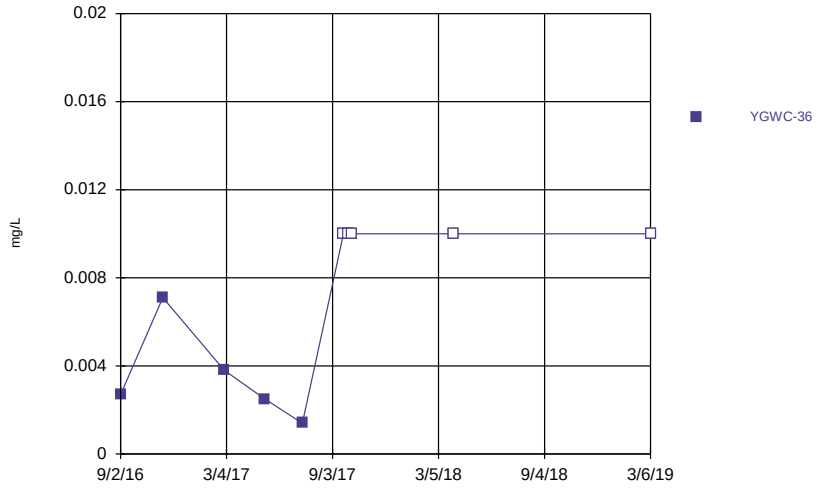
Time Series



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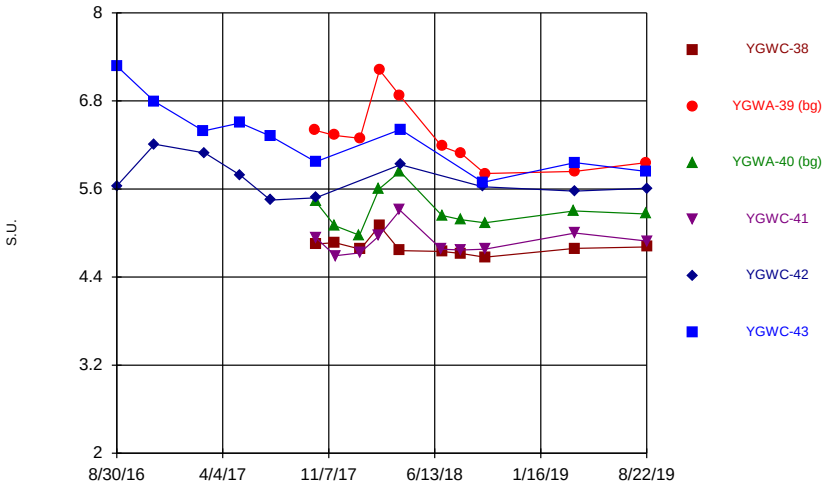
Plant Yates Client: Southern Company Data: Plant Yates

Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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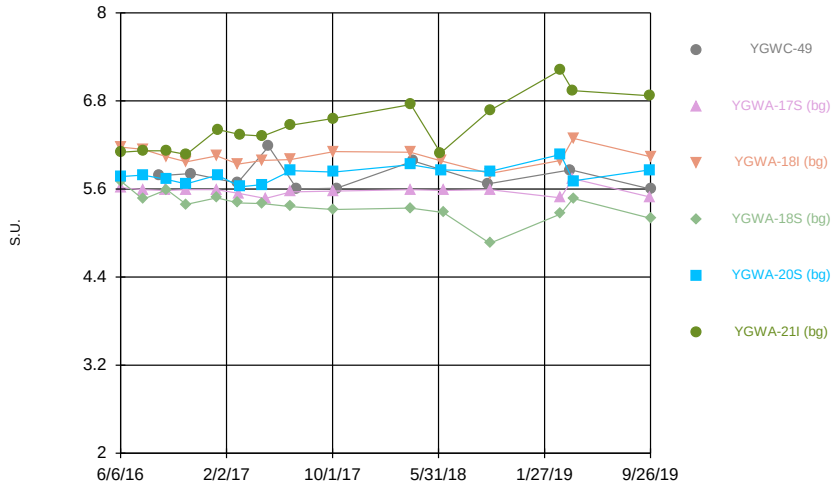
Time Series



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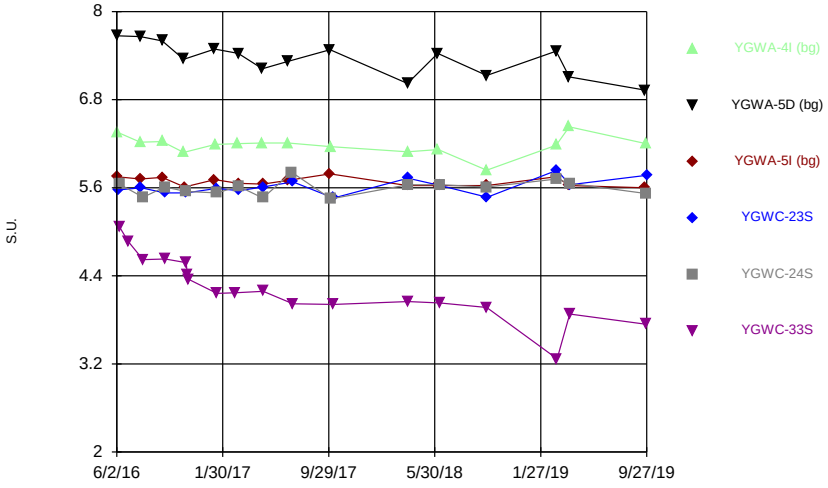
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Time Series



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Plant Yates Client: Southern Company Data: Plant Yates

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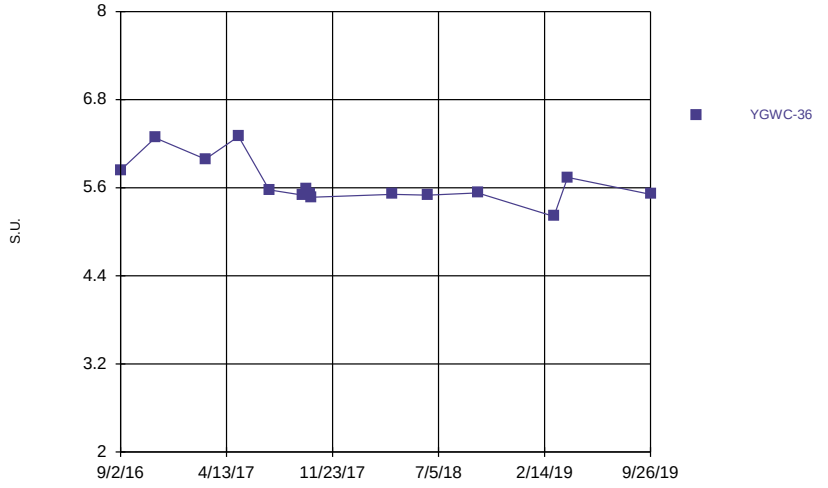
Time Series



Constituent: pH Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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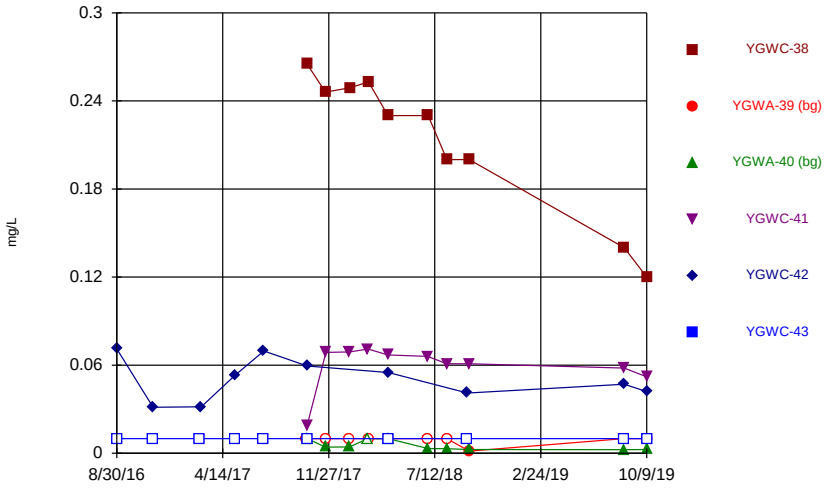
Time Series



Constituent: Selenium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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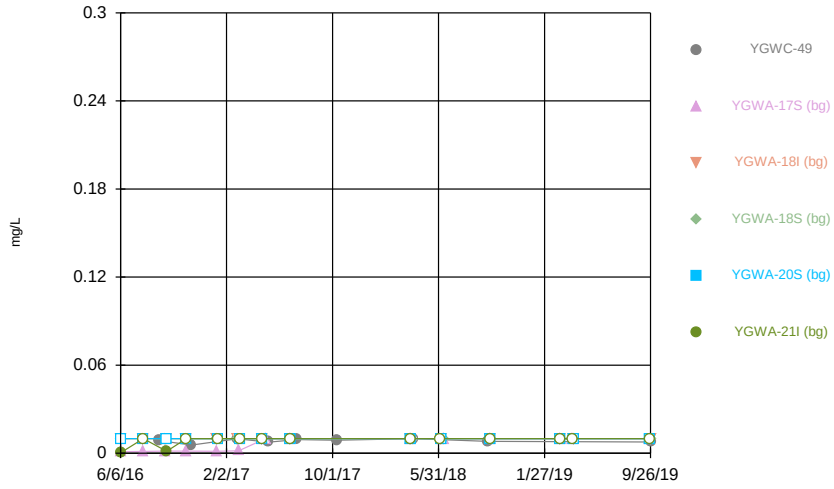

Constituent: Selenium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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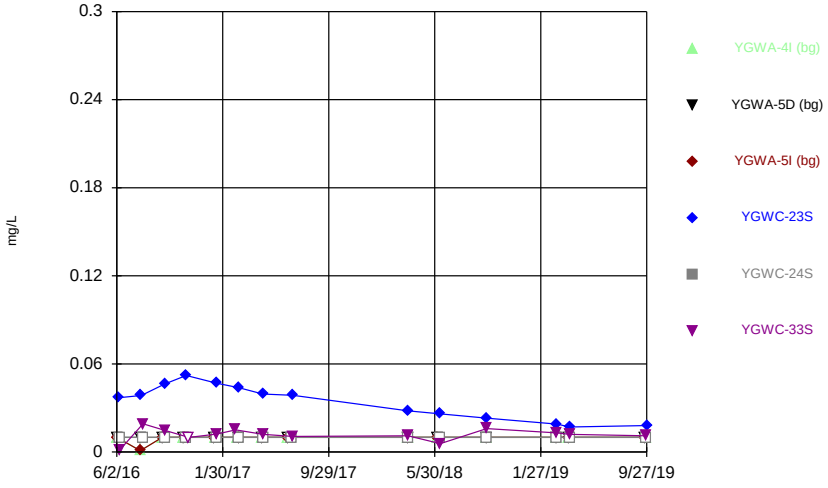

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Plant Yates Client: Southern Company Data: Plant Yates

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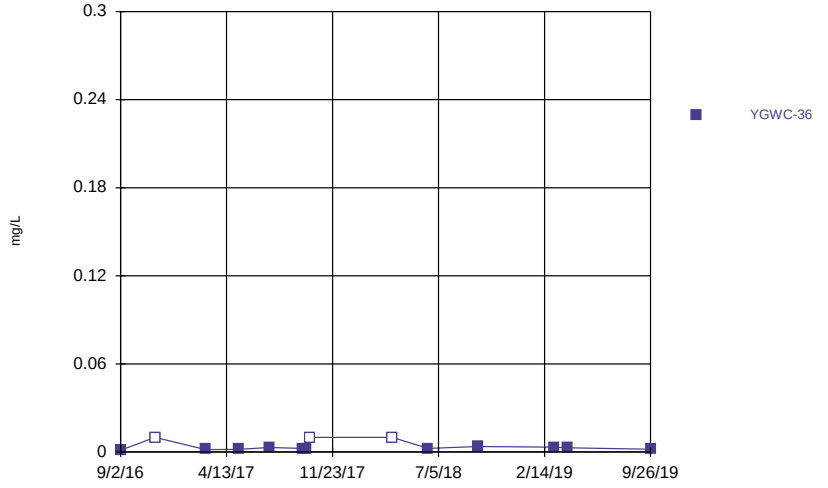
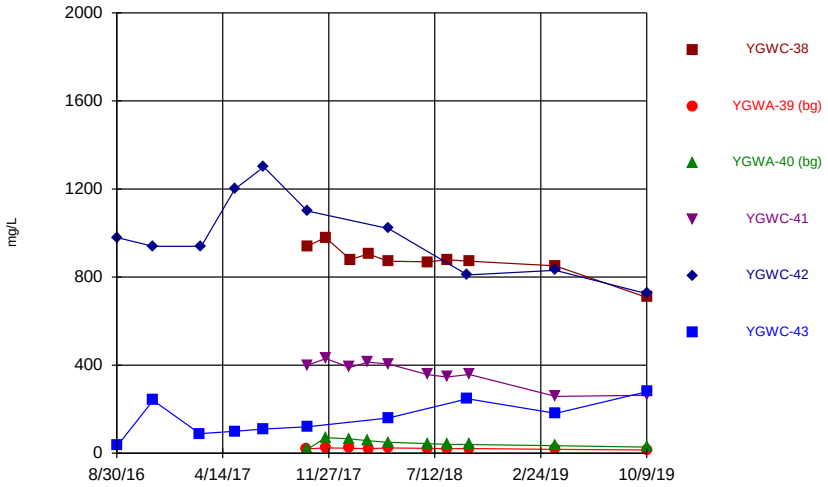


Constituent: Selenium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

Sanitas™ v.9.6.23 Sanitas software licensed to ACC. UG

Time Series



Constituent: Sulfate Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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Hollow symbols indicate censored values.

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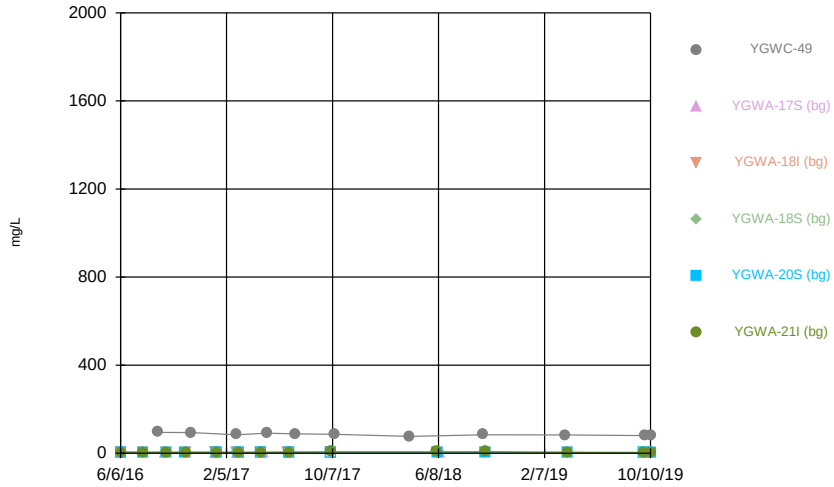

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Plant Yates Client: Southern Company Data: Plant Yates

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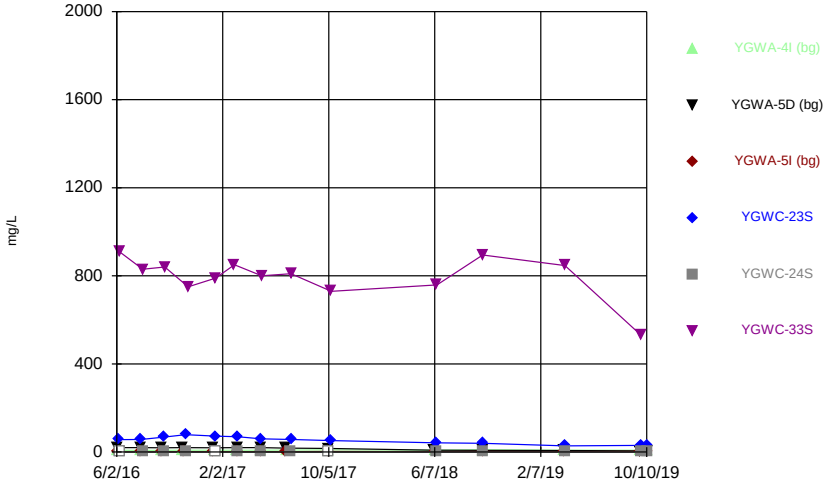

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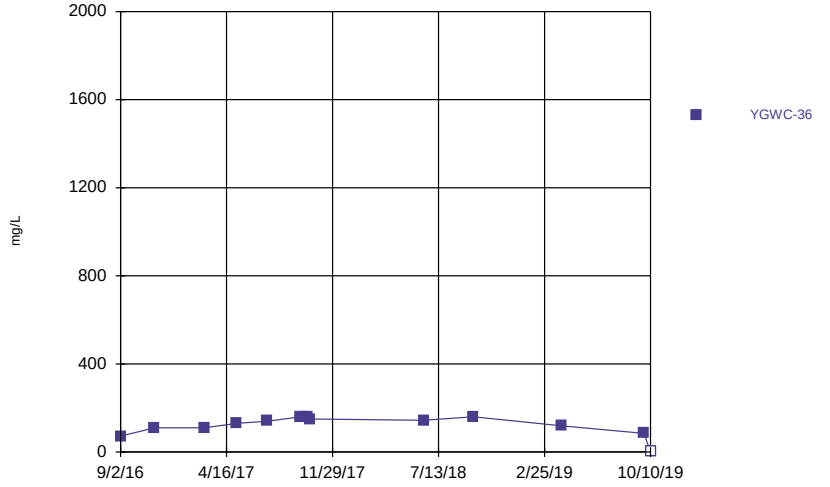

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Plant Yates Client: Southern Company Data: Plant Yates

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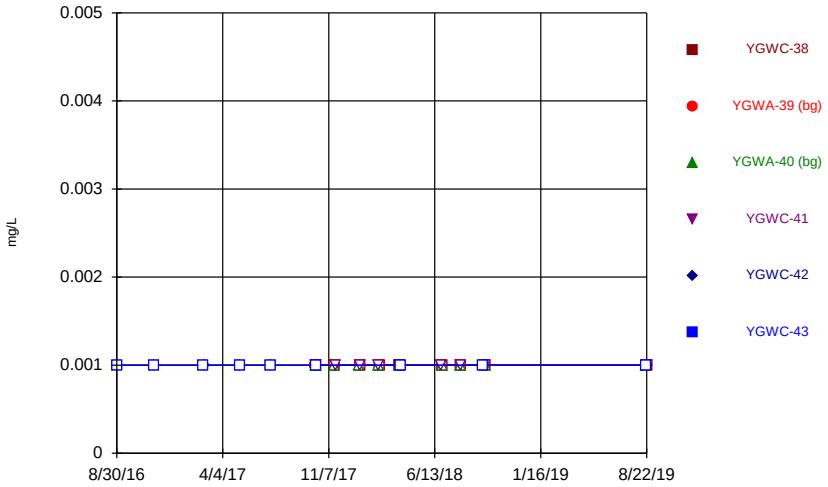

Constituent: Thallium Analysis Run 11/18/2019 11:43 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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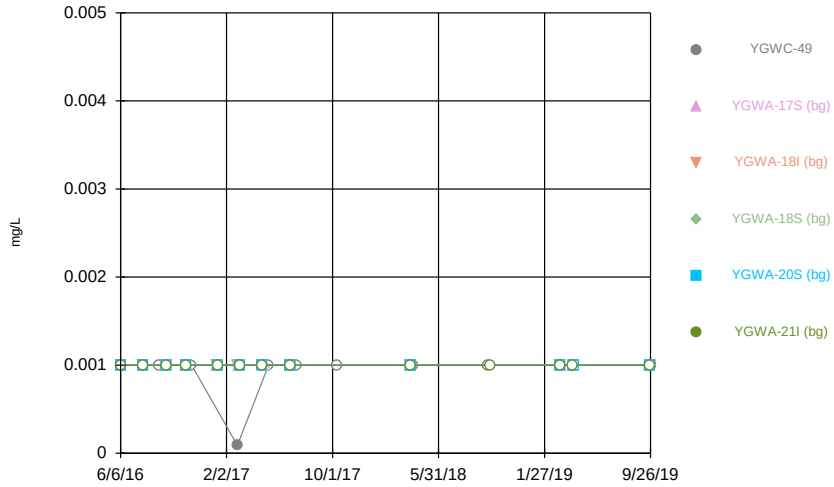

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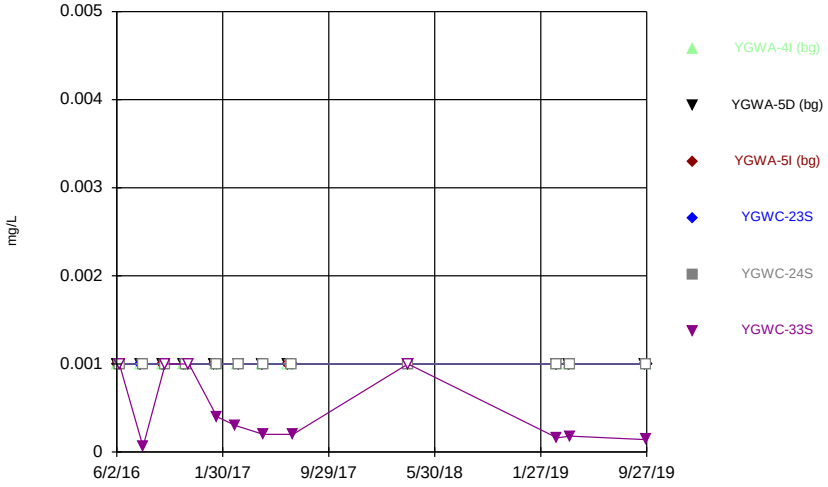

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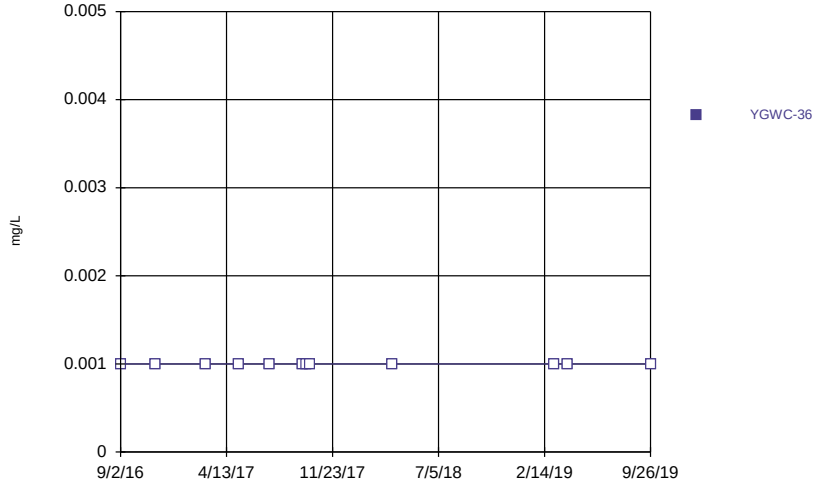

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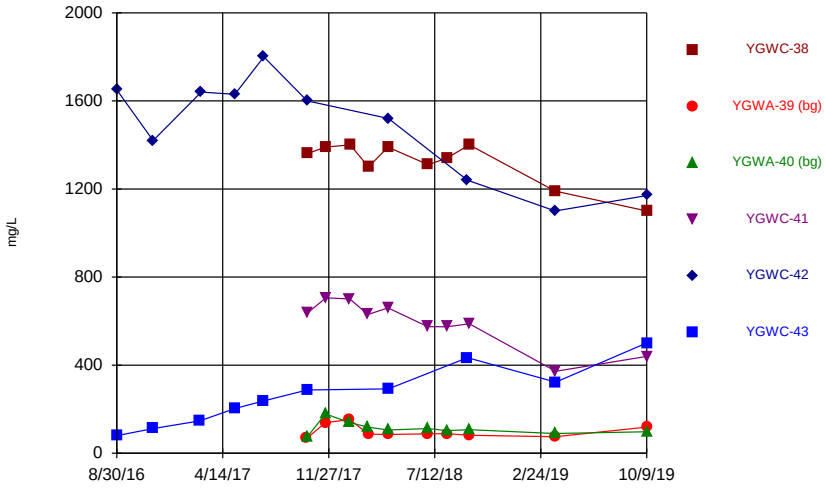
Plant Yates Client: Southern Company Data: Plant Yates

Time Series



Constituent: Total Dissolved Solids Analysis Run 11/18/2019 11:44 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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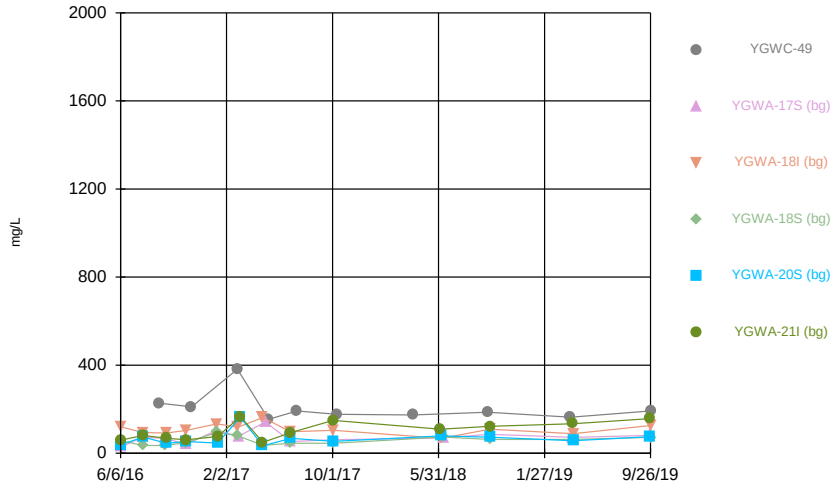
Time Series



Constituent: Total Dissolved Solids Analysis Run 11/18/2019 11:44 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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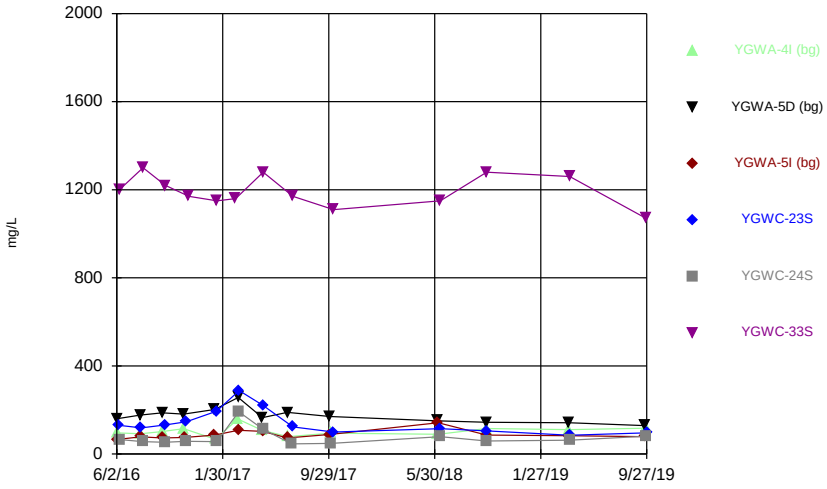
Time Series



Constituent: Total Dissolved Solids Analysis Run 11/18/2019 11:44 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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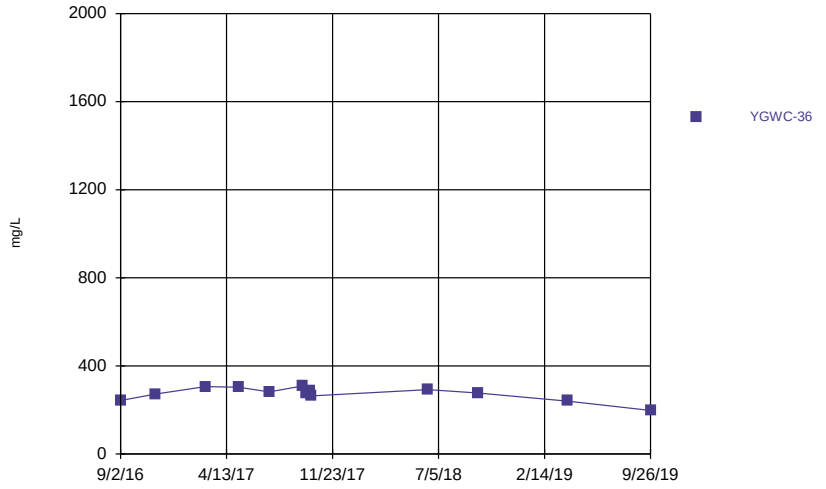
Time Series



Constituent: Total Dissolved Solids Analysis Run 11/18/2019 11:44 AM View: Time Series
Plant Yates Client: Southern Company Data: Plant Yates

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